

# Annual Report Board of Health

CITY OF NEWARK  
NEW JERSEY

*Newark  
- Dept. of Health  
- Annual Report*



Two hundred and fiftieth  
Anniversary  
1666-1916



1666

1916



ROBERT TREAT directing landing  
of founders of NEWARK

250 Anniversary

NEWARK NEW JERSEY



Newark Board of Health Building and City Dispensary, William and Plane Streets

WITH THE COMPLIMENTS OF THE

**BOARD OF HEALTH**  
**OF NEWARK, N. J.**

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THIS DEPARTMENT WOULD BE GLAD TO RECEIVE YOUR  
PUBLICATIONS IN RETURN

CHARLES V. CRASTER, M. D., D. P. H.  
HEALTH OFFICER



ANNUAL REPORT  
OF THE  
**Board of Health**  
CITY OF NEWARK, N. J.



A description of the activities along the lines of Public  
Sanitation, Disease Prevention, Pure Food and Milk,  
as well as other efforts to improve the living  
and health conditions of the  
community.

FOR THE YEAR ENDING DECEMBER 31, 1915

THE ESSEX PRESS PRINTERS  
NEWARK, N. J.







"A murderous array of diseases has to be fought against and the battle is not a battle for the sluggard."—*John Wesley*.

TO THE READER—It is hoped that the form of this report will be found to tell a story of interest and value to all who have the health of the community at heart. It is the record of activities of 140 employees of the different Divisions and Bureaus of the Board of Health, who have worked throughout the year to safeguard the health of the three hundred and seventy-five thousand citizens of this city.

CHARLES V. CRASTER, M. D., D. P. H.,

*Health Officer.*

Newark, N. J., February, 1916.



# MEMBERS OF THE BOARD OF HEALTH OF NEWARK, NEW JERSEY

FOR THE YEAR 1915

WM. S. DISBROW, M.D., <i>President</i> .... .	151 Orchard Street
THOMAS J. CALLAN... . . . .	574 Broad Street
FRED S. CRUM . . . . .	751 Clifton Avenue
EDW. E. GNICHTEL . . . . .	87 Magnolia Street
LITTLETON KIRKPATRICK. . . . .	424 Ridge Street
D. L. McCORMICK, M.D. . . . .	9 Tichenor Street
MORRIS RACHLIN . . . . .	76 Shanley Avenue
THEO. TEIMER, M.D. . . . .	184 Clinton Avenue
C. F. WEBNER, M.D. . . . .	96 Clinton Avenue
ELMER G. WHERRY, M.D. . . . .	325 Clinton Avenue

## HEALTH OFFICER

(Acting) CHAS. V. CRASTER, M.D., D.P.H. . . 51 Cypress Street

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DAVID D. CHANDLER (retired June 1st, 1915)

STANDING COMMITTEES OF THE  
BOARD OF HEALTH  
FOR THE YEAR 1915

## SANITATION

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DR. WERNER

DR. THAYER

MR. CRUM

MR. CALLAN

## FINANCE

MR. GUNDEL

MR. KIRKPATRICK

MR. RACHLIN

## LAWS AND ORDINANCES

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MR. CALLAN

MR. KIRKPATRICK

## RULES

MR. KIRKPATRICK

MR. CALLAN

MR. CRUM

## APPOINTMENTS

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MR. CRUM

DR. WILSON

## SUPPLIES

MR. RACHLIN

MR. KIRKPATRICK

MR. CALLAN

## CITY HOSPITAL

MR GNICHTEL

DR TEIMER

MR CALLAN

DR WEBNER

DR WHERRY

## TRAINING SCHOOL

DR WEBNER

DR MCCORMICK

DR TEIMER

DR WHERRY

DR DISBROW

## TUBERCULOSIS SANATORIUM

DR TEIMER

MR CALLAN

DR WEBNER

MR RACHLIN

DR MCCORMICK

## FOOD AND DRUGS

MR RACHLIN

MR KIRKPATRICK

MR CALLAN

## PURCHASING

MR RACHLIN

MR KIRKPATRICK

MR CALLAN

## SEX HYGIENE AND SOCIAL ETHICS

MR CALLAN

MR KIRKPATRICK

MR RACHLIN

## LEGISLATIVE

MR GNICHTEL

DR MCCORMICK

DR TEIMER

DR WEBNER

MR CRUM

MR KIRKPATRICK

## CHILD HYGIENE

DR WHERRY

DR MCCORMICK

DR TEIMER

MR CRUM

DR WEBNER

## MEETINGS

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### BOARD OF HEALTH

Meetings held in the Board of Health Offices, William and Plane Streets, Newark, N. J.

The regular meeting of the Board is held on the First Tuesday of each month at 8 30 P. M. for the transaction of all business.

The regular meetings of the "Sanitary Committee are held on the Thursday preceding the First Tuesday of each month at 8 30 P. M.

### NOTICE

The printing and publication of this Report is paid for out of the funds of the City, and for the information of taxpayers. Copies may be had without charge on application to the Board of Health, Plane and William Streets, Newark, N. J.

# EMPLOYEES OF THE BOARD OF HEALTH

## OFFICE DIVISION

JOHN J. GREEN..... *Clerk, Bureau Contagious Diseases*  
302 Riverside Avenue

W. J. BUEHLER . . . . . *Bookkeeper*  
7 Ninth Avenue

WILLIAM H. YOUNG..... *Clerk, Sanitary Division*  
662 Mt. Prospect Avenue

ELBERT S. BALL..... *Clerk, Sanitary Division*  
226 South Tenth Street

ROBERT F. MORGAN, Jr. . . . . *Stenographer and Clerk*  
150 Milford Avenue.

JOHN J. ROGERS . . . . . *Stenographer, Food and Drug Division*  
109 South Eighth Street

MISS JENNIE McNALLY. . . . . *Telephone Operator*  
135 Renner Avenue

MISS CORA B. NATHAN..... *Clerk*  
315 Walnut Street

EDWARD E. WORT, M. D. *Superintendent, Bureau Contagious Diseases*  
271 High Street.

HERBERT B. BALDWIN..... *Chemist*  
927 Broad Street

WILLIAM WIENER..... *Meteorologist*  
62½ Nelson Place

## BOARD OF HEALTH.

## CITY DISPENSARY

WILLIAM A. SMITH, . . . . .	.....Apothecary
40 Nelson Place.	
HENRY A. OLYMAN, . . . . .	Assistant Apothecary
16 Montrose Street	
ARTHUR F. WARREN, . . . . .	Assistant Apothecary
101 Essex Avenue	
LEO J. McMANUS, . . . . .	Dentist
210 Mulberry Street	
ANNA BRIDGETT, . . . . .	Nurse
34 South Seventh Street	
MORRIS SEIDL, . . . . .	Dentist
181 South Eighth Street	

## DISTRICT PHYSICIANS

DR. CHAS. F. HILL, . . . . .	180 Polk Street
DR. SAMUEL HIRSHBERG, . . . . .	136 1/2 1st Avenue
DR. W. F. L. K. . . . .	134 Mulberry Avenue
DR. MEYER JEDEL, . . . . .	121 1st Street
DR. MARY BROADNAX, . . . . .	79 Clinton Avenue
DR. WM. FISCHER, . . . . .	169 South Seventh Street

## SANITARY DIVISION MEAT INSPECTORS

WERNER RUNGE, <i>Veterinarian</i> , . . . . .	130 Union Street
DANIEL KUHN, . . . . .	282 South Seventeenth Street

## PLUMBING INSPECTORS

JOHN B. SULLIVAN, <i>Chief</i> , . . . . .	44 Stuyvesant Avenue
JOHN L. WHELAN, . . . . .	120 Lincoln Avenue
EDWARD P. COLLEY, . . . . .	15 Walnut Street
CHAS. A. HALL, & SONS, . . . . .	10 Walnut Street
ANDREW J. MCGOOKIN, . . . . .	188 Broadway
JACOB KULI, . . . . .	69 Hunterdon Street
PATRICK J. MONAGHAN, . . . . .	166 Avon Avenue



## FOOD AND DRUG INSPECTORS

SAMUEL G SHARWELL, <i>Chief</i>	102 Eleventh Avenue
*WILLIAM S WEBB	96 Alpine Street
*LEWIS BOUILLIER	382 South Eleventh Street
HENRY F. KNELLER, <i>Temporary Milk Inspector</i>	52 Columbia Avenue

\*Sanitary Inspectors Detailed as Food and Drug Inspectors.

## DETAILED INSPECTORS TO HEALTH OFFICER

ANDREW J BRADY	49 Seymour Avenue
CHARLES F CONRAD	856 South Seventeenth Street
BERNARD J CAHILL	160 South Tenth Street

## DETAILED IN HEALTH OFFICE

HOWARD HUFFERT	130 South Eighth Street
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## SANITARY INSPECTORS

CHARLES H BURKE	125 Union Street
HUBERT O'ROURKE	24 Leo Place
ANTONIO PANZERA	95 Madison Street
PATRICK J KEATING	111 Bergen Street
GEORGE A VAN HOUTEN	716 Bergen Street
WILLIAM HOPPER	142½ Sherman Avenue
JAMES WHELAN	193 Parker Street
HENRY McDONALD	29 Vermont Avenue
CASPER BENZ	31 Fifth Street
EDWARD J FLYNN	67 First Street
CHARLES E. DEVINE	78 Beverly Street
ALBERT BREIJENBACH	38 Columbia Avenue
PATRICK J BROGAN	105 Fourth Street
JOSEPH A MAGUIRE	156 Norfolk Street
ADOLPH O ELSASSER	746 South Nineteenth Street
GUSTAVE FRIEDMAN	431 South Eleventh Street
CLARENCE J PALMER	428 South Fifteenth Street
EDWARD A CLEARY	122 Orchard Street

## DISINFECTING CORPS

SAMUEL KNOTT, <i>Chief</i>	49 Plane Street
HIRAM R STEWART	79 West End Avenue
JAMES I. NICHOLS	117 Rowland Street
ANDREW J. CUMMINGS	189 Highland Avenue
THOMAS ILLIEN	17 Stanton Street
GEORGE W. GILMORE	169 Ridgewood Avenue
IRWIN C. DAKIN	43 Eleventh Avenue
JAMES J. WATERS	325 Walnut Street
FRED W. NICHOLS	118 Ninth Avenue

## JANITORS

ADOLPH HOERNIG	62 Sixteenth Avenue
VAN S. HURLBURT	46 Nelson Place

## MEDICAL INSPECTORS OF PAROCHIAL SCHOOLS

DR. H. C. POVEY	39 Mott Street
DR. H. G. MCBRIDE	248 Mulberry Street
DR. M. J. COFFEY	216 Bank Street
DR. PATRICK J. CLARK	393 South Orange Avenue
DR. D. R. CAMPBELL	22 Central Avenue

## BACTERIOLOGICAL DIVISION

DR. R. N. CONNOLLY	<i>Bacteriologist</i> 117 Fifth Street
DR. THOMAS RIPLEY	<i>Assistant Bacteriologist</i> 101 Hillside Avenue
DR. H. A. TARBELL	<i>Assistant Bacteriologist</i> 87 Hillside Avenue
DR. G. WEST LISTER	<i>Assistant Bacteriologist</i> 40 Rose Avenue
DR. I. S. MARTINO	<i>Pathologist</i> 118 Broad Street
ARTHUR CANT	<i>Assistant Pathologist</i> City Hospital
KARL W. MUNK	<i>Laboratory Assistant</i> 45 Emmett Street
JOHN A. DUNN	<i>Culture Collector</i> 65 South Seventh Street
WILLIAM J. FOYLE	<i>Culture Collector</i> 142 Hudson Street

## BUREAU OF TUBERCULOSIS

DR THOMAS N. GRAY, *Chief*. 20 Halsted Street, East Orange, N. J

## FIELD FORCE

## CLINICAL ASSISTANTS

DR MOSES J FINE, *Chief* 145 South Orange Avenue  
 DR ABRAHAM ROTHSEID.....147 Summer Avenue  
 DR HERMAN BLSCH.....21 Tichenor Street  
 DR CARMINE G BERARDINELLI .....02 Eighth Avenue

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 MISS LAVINIA M WARD 57 Mt Prospect Avenue  
 MRS CORNELIA WHITEHEAD.. 135 New Street  
 MRS GENEVIEVE K HEROLD. 76 Broad Street  
 MRS ELEANOR FORNACHON. Caldwell, N. J

## STENOGRAPHER

MARY F McGUINNESS..... 273 New Street

## VERONA SANATORIUM

DR GEORGE E. HAHNEN *Sur*  
 FRANCES L. DOLAN.. *Nurse*  
 MABEL E. D. HYATT *Nurse*  
 HATTIE B MOORE *Nurse*  
 JULIA MEEHAN *Nurse*  
 ELIZABETH LENNON. *Attending Nurse*  
 EVELYN LENNON.. *Attending Nurse*  
 MARY DEVINE. *Chief*  
 BERNARD LAWRENCE.. *Assistant Chief*  
 JENNIE MATESH. *Head Nurse*  
 BERTHA CORBETT. *Matron*  
 ANTONIO OLMUNSKA *Attender*  
 LOUIS SALECK. *Attender*  
 VICTOR MASAKEVITCH. *Attender*  
 GEORGE WEISS *Attender*  
 KATE FOX.....*Laundress*  
 LILLIAN EMORY. ....*Laundress*

RANDOLPH L. WEBSTER	<i>Laundry Helper</i>
THOMAS HAND	"
JOHN SCHWANS	<i>Helper</i>
TIMOTHY WALSH	<i>Helper</i>
MICHAEL LEVANT	<i>Seamstress</i>
HENRY PERI	" " " "
STELLA WEITZBERG	..... <i>Seamstress</i>

## BUREAU OF CHILD HYGIENE

## DIRECTOR

DR. JULIUS LEVY ..... 191 Littleton Avenue

## CLINIC PHYSICIANS

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 DR. CHARLES ROBBINS ..... 150 West Street  
 DR. EDVIGE DRAGONEY ..... 54 Chittenden Avenue

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 CHARLOTTE WEINTHA ..... 25 Quitman Street  
 FRANCIS MILLER ..... 75 Stratford Place  
 EVA M. WAX ..... 132 Court Street  
 EMMA MUELLER ..... 147 Chifton Avenue  
 ANNA K. JONES ..... 196 Jellicoff Avenue  
 CHARLES L. GREEN ..... 2 Chifton Avenue  
 WAITE C. GREEN ..... 4 Johnson Avenue  
 M. KENNETH GREEN ..... 154 Garside Street  
 ELIZABETH AITKEN ..... 1 North Seventh Street

## SECRETARY

ANNA E. HORN ..... 532 South Thirteenth Street

## DISTRICT PHYSICIAN'S LINE

1st DISTRICT DR. CHARLES F. HILL—Adam Street, Avenue F, Market Street, Broad Street and City Line

2nd DISTRICT—DR. MARY BROADNAX Tichenor Street, Clinton Avenue, Avenue F and City Line

3rd DISTRICT DR. W. F. L. RODEMANN—Adam Street, Tichenor Street, Broad Street and City Line

4th DISTRICT—DR. SAMUEL HIRSCHBERG Goad Street, Clinton Avenue, High Street, South Orange Avenue, Bergen Street, Warren Street, Sussex Avenue and City Line.

5th DISTRICT DR. WILLIAM FISCHER Clinton Avenue, High Street, South Orange Avenue, Bergen Street, Warren Street and City Line.

6th DISTRICT—DR. MEYER JEDEL—Fulton Street, Central Avenue, Sussex Avenue, Warren Street and City Line

BOARD OF HEALTH.

CLINICS AT THE CITY HOSPITAL

MEDICAL—9 A. M. Daily except Sunday

DISEASES OF CHILDREN Monday, Wednesday, Friday, 10 o'clock

SURGICAL—9 A. M. Daily except Sunday

GENITO URINARY—Monday and Thursday, 10 o'clock

DISEASES OF WOMEN Tuesday and Friday, 3 o'clock

DISEASES OF SKIN—Tuesday and Friday, 9 30 o'clock

SYPHILIS—Wednesday, 3 o'clock

EYE, EAR, THROAT AND NOSE Monday, 3 o'clock

NERVOUS DISEASES Friday, 2 o'clock

ORTHOPEDIC—Monday, 9 o'clock

DENTIST—Monday, Wednesday and Friday, 1 o'clock

TUBERCULOSIS—Children, including glands and joints, Monday, 10 o'clock.

PULMONARY Tuesday, 3 o'clock.

PULMONARY—Wednesday, 3 o'clock Laryngeal, Wednesday, 4 o'clock

PULMONARY—Thursday, 3 o'clock Children, Thursday, 4 o'clock

PULMONARY Friday, 3 o'clock

**Examination Days for Admission to Sanatoriums:**

VERONA—Monday, 10 o'clock

GLEN GARDNER—Wednesday, 10 o'clock

SOHO Thursday, 10 o'clock

## DISPENSARY MEDICAL STAFF

## DEPARTMENT OF SURGERY

NELSON K BENTON, M D..... *Chief of Clinic*

## ASSISTANTS

H ROY VAN NESS, M D.	NATHAN J FURST, M D.
CHAS G CRANE, M D	M A FLOWER, M D
OTTO LAWREN, M D	ROYAL M COHEN, M D.
H J GILBERT, M. D.	

## DEPARTMENT OF MEDICINE

F C HORNBY, M. D... .. *Chief of Clinic*

## ASSISTANTS

PHILIP COLON, M D	G B. EMERY, M. D
RAYMOND MULLIN, M D.	FREDERICK A ALLING, M. D.
JAMES E MCCORMICK, M. D	GRANT THORBURN, M. D
ROBT S TOPPING, M D.	

## BUREAU OF TUBERCULOSIS

THOS. N GRAY, M D. . . . . *Chief of Clinic*

## ASSISTANTS

M J. FINE, M. D	C G BERARDINELLI, M D.
HERMAN BUSH, M D.	A ROTHSEID, M. D

## DEPARTMENT OF EYE, EAR, NOSE AND THROAT

WELLS P. EAGLETON, M D.... . *Chief of Clinic*

## ASSISTANTS

E. A. CURTIS, M. D	S. HIRSCHBERG, M. D.
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## DEPARTMENT OF GYNAECOLOGY

WM GAUCH, M D.... . *Chief of Clinic*

## ASSISTANT

MARY E BROADNAX, M. D

## ORTHOPEDIC DEPARTMENT

SIDNEY A. TWINCH, M. D. . . . . *Chief of Clinic*

## ASSISTANT

CHAS. E. SELVAGE, M. D.

## GENITO URINARY AND CYSTOSCOPIC DEPARTMENT

C. R. O'CROWLEY, M. D. . . . . *Chief of Clinic*

## ASSISTANTS

WM. J. WARD, M. D.

I. I. D.

BENJ. A. FURMAN, M. D.

FRANK A. ROBERTS, M. D.

H. C. POVEY, M. D.

W. F. L. ROBFMANN, M. D.

## PEDIATRIC DEPARTMENT

R. HUNTER SCOTT, M. D. . . . . *Chief of Clinic*

## ASSISTANTS

HENRY G. MCBRIDE, M. D.

H. H. STRAUPE, M. D.

F. J. TORREY, M. D.

WM. R. SILVERSTEIN, M. D.

FRANK W. PINNELL, M. D.

## DEPARTMENT OF THE SKIN INCLUDING SYPHILIS

H. J. F. WALLHAUSER, M. D.

*Chief Division "A"*

LOUIS A. KOCH, M. D.

*Chief Division "B"*

## ASSISTANTS

JOHN T. ENGLISH, M. D.

H. N. COMANDO, M. D.

## DENTAL DEPARTMENT

LEO J. McMANUS, D. D. S.

## DEPARTMENT OF NERVOUS DISEASES

C. C. BELING, M. D. . . . . *Chief of Clinic*

## ASSISTANTS

E. P. WHELAN, M. D.

H. W. POTTER, M. D.

## DEPARTMENT OF RECTAL DISEASES

DAVID A. KRAKER, M. D. . . . . *Chief of Clinic*



ANNUAL REPORT  
OF THE  
**HEALTH OFFICER**  
FOR THE YEAR 1915



ANNUAL REPORT  
OF THE  
HEALTH OFFICER  
FOR THE YEAR 1915

*To the Commissioners of the Board of Health:*

GENTLEMEN.—I beg to submit the following report of the work of the Divisions and Bureaus of the Board of Health for the twelve months ending December 31, 1915.

The state census taken the middle of last year gave the city a population of 366,721. There was, however, a considerable doubt of these figures being a correct statement, inasmuch as the methods of taking the census undoubtedly underestimated the existing conditions. A compromise figure of 375,000 has been generally accepted as more nearly the true estimate and this number has been taken in working out our annual mortality.

THE DEATH RATE

It is a satisfaction to record that our death rate for the year 14.3 per 1,000 of the population, was the lowest death rate ever recorded in the city. In 1864 we find the general death rate among a Newark population of 203,923 was 22.28 per thousand. If this rate had persisted in 1915, there would have been 8,355 deaths, or 2,973 more than actually

occurred during the year. The following table shows the annual death rate in the city, per thousand of population, since 1894.

CRUDE DEATH RATES ACCORDING TO CENSUS AND  
INTERCENSAL ESTIMATED INCREASES

	POPULATION	NO. OF DEATHS	DEATH RATE
1894	100,000	1,015	10.15
1895	100,000	1,000	10.00
1896	100,000	950	9.50
1897	100,000	900	9.00
1898	100,000	850	8.50
1899	100,000	800	8.00
1900	100,000	750	7.50
1901	100,000	700	7.00
1902	100,000	650	6.50
1903	100,000	600	6.00
1904	100,000	550	5.50
1905	100,000	500	5.00
1906	100,000	450	4.50
1907	100,000	400	4.00
1908	100,000	350	3.50
1909	100,000	300	3.00
1910	100,000	250	2.50
1911	100,000	200	2.00
1912	100,000	150	1.50
1913	100,000	100	1.00
1914	100,000	50	.50
1915	100,000	25	.25

The deaths during 1915 from the epidemic diseases of children show considerable decreases over those recorded in past years, with the exception of whooping cough. The mortality from typhoid fever, numbering eleven deaths during the year, is the lowest in the history of our records and indicates the improved sanitation of the city, as well as the purity of our water supply.

The following table shows the number of deaths from scarlet fever, diphtheria, and typhoid fever, recorded each year since 1894:

YEAR	SCARLET FEVER	DIPHTHERIA	TYPHOID FEVER
1894	60		74
1895	5	273	50
1896	6	218	47
1897	6	137	33
1898	6	133	41
1899	11	124	60
1900	10	143	50
1901	10	103	57
1902	12	105	47
1903	6	120	63
1904	23	150	40
1905	17	110	40
1906	21	99	50
1907	12	95	69
1908	8	66	35
1909		105	39
1910	22	104	44
1911	1	74	37
1912	11	91	26
1913	26	110	30
1914	7	41	26
1915	3	49	11

The records for the year show a considerable decrease in the deaths from measles over the number recorded for 1914, on the other hand, there is an increase in the number of deaths from whooping cough and epidemic meningitis. The following table sets out these differences:

	1914	1915
Deaths from Measles .....	44	13
Deaths from Whooping Cough ..	19	28
Deaths from Epidemic Meningitis	8	14

The number of cases of communicable diseases reported during the year in the city, as compared with the number recorded for 1914, is shown in the following table:

DISEASES NOTIFIED	1914	1915
Scarlet Fever.....	1,696	619
Diphtheria.....	1,490	1,207
Measles.....	5,824	1,465
Whooping Cough.....	1,008	1,844
Typhoid Fever.....	250	108
Chicken Pox.....	1,567	1,500
Purulent Ophthalmia.....	26	27
Malaria.....	1	5
Echthyma.....	11	246
Mumps.....	49	1,466
Paratyphoid.....	9	11
Epidemic Meningitis.....	16	14

Cases of scarlet fever, diphtheria, and measles decreased considerably throughout the year. There was, however, a notable increase in the whooping cough which developed into an epidemic of some intensity and which reached its maximum in the summer and late autumn months of 1915. Cases of mumps were also reported with increasing frequency during the first six months of the year. The incidence of this disease, however, declined rapidly after June. There was also some slight increase in the tuberculosis and poliomyelitis cases reported during 1915. The typhoid fever cases reported in the city proved to be the lowest number in eighteen years.

#### PROGRESS OF THE CITY.

The wisdom of the City's founders in selecting its site showed that, even at that time, the early settlers "knew how" to prepare for the future. The measures carried out for the infant city have been amply justified by its growth from a country town of 11,000 persons in 1830 to a position among the great industrial centers of the country.

The rapid increase in industrial progress has, however, been accompanied by the many problems and dangers that accompany the health conditions of the increased populations of modern manufacturing cities.

### HOUSING PROBLEMS

Prominent among these is the question of proper treatment of the situation arising out of the congestion of population in certain wards of the city. It has been estimated that more than two-thirds of the population of the city is overcrowded. The presence of large numbers of those who invariably crowd together in certain streets and sections of the city has brought about new elements and difficulties in the administration of public health affairs. Advances have to be made in national and religious customs, many of which are not acceptable to the modern ideas of sanitation and hygiene.

Such customs and superstitions have introduced new problems urgently requiring solution. Special city legislation has been passed for the control of many of these customs, particularly for the chicken markets in the city, many of which are still being held long conducted along legal lines. The sale of food from barrels and stands upon streets and sidewalks is still in need of adequate control.

### OVER-CROWDING, AN EVIL.

One of the results of the congestion in some wards has been a decided increase in the development of the cheap tenement and lodging house. In many of these places overcrowding is present all the time, it being accompanied by insufficient sunlight, fresh air and ventilation, as well as a general uncleanliness due to inadequate bathing and sanitary facilities in buildings not originally intended to be used as apartments or tenement houses. It is the congestion of population in restricted areas that has much to do with the extent and frequency of epidemic diseases in the community.

## DIFFICULTIES IN POLY GLOT COMMUNITIES

The control of all communicable diseases is faced by many difficulties amongst a poly-lingual population. Circulars of instructions upon any public health measure are required to be printed in several different languages and it is an advantage to have our Sanitary Inspectors speak at least one foreign language. The spread of a proper knowledge of sanitation and hygiene among the old and middle-aged foreign-born seems beset with many difficulties and at times it would seem as if against the prejudice of rooted ignorance and indifference, or propaganda for improved sanitation beats in vain.

## WATER SUPPLY.

The effective patrol and supervision of the catchment area forming the watershed of the Pequannock River and its tributaries by the Newark City Board of Works has resulted in the obtaining of a water of exceptional purity for the city. Farms and other possible sources of pollution upon the area have been bought up by the city and by this policy of excluding danger the water supply has attained its present standard. The average daily supply of water to the city amounts to 43,000,000 gallons, or a per capita allowance of 115 gallons daily. Two sanitary inspectors of the board are detailed to make semi-monthly trips to the watershed to obtain samples of water for chemical and bacteriological analysis.

## THE SANITARY CONDITION OF THE CITY

The City of Newark is now well sewered and drained; comparatively few cesspools, privy-vaults or wells are in existence at this time and these are mostly situated in the outskirts of the municipality. Several sections of the city



are, however, inadequately provided with storm sewers of sufficient capacity to take care of unusual conditions due to floods. At such times, the department is over-burdened with complaints from householders regarding the flooding of cellars and basements with sewage and the backing up of sewer upon roads and sidewalks. With the completion of the Passaic Valley Trunk Sewer, which will convey the sewage from the Passaic Valley towns, including Newark, as far out as Robbins Reef, N. Y., a distance of twenty six miles from Paterson, N. J., the pollution of the Passaic River will be minimized.

Yours respectfully,

CHARLES V. CRASTER, M. D., D. P. H.,

*Health Officer*



## RFCEIPTS—1915

[illegible]

## DISBURSEMENTS—1915

[illegible]



ANNUAL REPORT  
OF THE  
**SANITARY DIVISION**



# ANNUAL REPORT OF THE SANITARY DIVISION

*Charles V. Craster, M. D., D. P. H., Health Officer*

DEAR SIR:—I herewith submit the report of the Sanitary Division for the year 1915.

The Sanitary Inspections made by the eighteen uniformed inspectors numbered 40,034, of which 37,167 were original inspections, the remainder being inspections made in response to complaints received.

## ANTI FLY CAMPAIGN.

Special instructions were given to inspectors to inaugurate an anti-fly campaign during the year. Large fly posters for store windows and circulars for hand distribution were printed. Of the large posters 484 were distributed during the fly season. For the purpose of striking at the breeding places of flies, 4,166 stables and cow barns were visited throughout the city. The provision of proper manure bins provided with fly tight covers was required in all instances, as well as the cementing and proper drainage of all stable floors, to conform with the city ordinances. As having a direct bearing upon fly breeding, the garbage dumps of the city contractors were under constant surveillance fifty-seven inspections were made 24,588 yards throughout the city were also inspected, and 1,793 found in an insanitary condition. Special efforts were made to

insure a sanitary condition of slaughter houses and chicken markets, of which 2,382 inspections were made during the year. A vigorous campaign was carried on to require householders to provide themselves with properly covered garbage cans; 298 notices were served by inspectors for this purpose.

### OVER-CROWDED AND INSANITARY HOUSES

Conditions indicating overcrowding were brought to the attention of the division during the year as existing to a great extent in the Third, Fifth and other wards of the city. As the result of a sanitary investigation of these places, thirty houses were condemned as unfit for habitation; eighty-three houses had insanitary living rooms condemned; thirty-nine tenement houses were found to be over crowded; 10,703 cellars were inspected, some of which were being used as dwellings, 1,533 of these were found insanitary. 273 dwelling houses were found to have no water supply, eleven had no water closets or privies; 185 had leaking roofs, 605 had defective storm leaders and gutters, 862 had defective plumbing, and 635 had defective water closets.

### CHICKEN PERMITS AND COWBARNES.

The constant complaints concerning the keeping of chickens and cows within the city limits bring up the question as to whether such a condition should be tolerated in large cities. Last year 4,167 Chicken Permits were issued by the department. Complaints are continually being received against the keeping of cows in built up localities and much may be said from a sanitary point of view against the continuation of such practices.



## MOSQUITO CONTROL.

The division co-operated heartily with the County Mosquito Extermination Commission and all complaints turned in by the commission have received prompt attention. As a result of inspections, 224 vacant lots were found to be in an insanitary condition. Stagnant water suitable for mosquito breeding was found to exist in 108 instances.

## ANTI-SPITTING ORDINANCES.

The inspectors of the division made eighteen arrests for violating the city anti-spitting ordinances during the year. Penalties were imposed in all cases. Warning cards reminding persons of the city anti-spitting ordinances were given to inspectors for distribution to violators. 432 anti-spitting signs were posted in various sections of the city.

## BAKERIES AND LUNCH ROOMS.

The sanitary condition of bakeries and lunch rooms was supervised during the year, 402 such premises being inspected. 526 cards, printed in five languages, forbidding the handling of food by customers, were distributed in market and store districts.

A monthly lecture to the Sanitary Inspectors was inaugurated during the year, the subjects being chosen so as to be of an educating value in sanitation.

A firm stand has been taken against the insanitary and unsightly toilet situation. These objects have been removed from our office and it is hoped the example will be followed. Dirty cuspidors are a menace to health.

## DETAILED REPORT OF THE SANITARY DIVISION

Inspections from complaint cards.....	3,267
Inspections verified.....	2,655
Inspections, no cause.....	71
Number of original inspections made.....	3,338
Total number of inspections made.....	1
Number of written notices served.....	1,68
Abatements from written notices.....	1,68
Verbal notices served.....	1,68
Number of abatements from verbal notices.....	1,68
Total number of abatements.....	1,68
Number of hours in court.....	7
Cisterns and wells inspected.....	8
Samples of cistern and well water examined.....	1
Number of cisterns and wells closed.....	1
Sewer connections ordered.....	1
Sewer connection drains inspected.....	1
Sewer connections to carb line.....	1
Cesspools inspected.....	8
Alleyways inspected.....	1
Alleyways inspected found unsanitary.....	1
Streets found to need cleaning.....	1
Cellars inspected.....	761
Cellars inspected found unsanitary.....	1
Ashes accumulations.....	1
Garbage accumulations.....	81
Stagnant water on vacant lots.....	108
Defective water pipes.....	300
Houses with unsanitary living rooms.....	83
Houses unfit for habitation.....	30
Number of expectorating signs posted throughout City.....	432
Number of tenement houses found over-crowded.....	39
Special inspections made.....	12
Number of bakeries inspected.....	211
Number of lunchrooms inspected.....	188
Number of factories inspected.....	33

## BOARD OF HEALTH

35

Inspections of scavenger dumps.....	57
Inspections of picture theatres.....	32
Number of cases inspected.....	93
Warning cards delivered to commissioners.....	73
Complaints on city street.....	91
Official calls to City Hall.....	608
Visits to owners and agents of real estate.....	154
Barber shops inspected.....	94
Weekly bulletins delivered.....	105
Warning cards delivered on the handling of foodstuffs.....	526
Swat-the fly cards delivered.....	184
Soda fountains inspected.....	24
Warning cards handed to persons violating the spitting ordinance.....	190
Clean-up circulars delivered.....	18,000
No. of special notices served to provide garbage receptacles.....	298
Abatements from same.....	114
Six inspectors detailed eight half days during the year to arrest violators of the spitting ordinance	
Number of arrests made for violations of the spitting ordinance and penalties imposed.....	18
Slaughter house inspections.....	2,382
Slaughter houses found in an unsanitary condition.....	43
Houses unprovided with water closets or privy vaults.....	11
Houses with no water supply.....	273
Houses with leaking roofs.....	185
Storm gutters and leaders defective.....	605
Hydrants in yards defective.....	20
Privy vaults and houses over same unsanitary.....	51
Privy vaults full.....	198
Cesspools full.....	72
Privy houses dilapidated.....	27
Privy vaults and houses over same ordered reconstructed.....	24
Privy vaults ordered cleaned and filled.....	109
Yards inspected.....	1,488
Yards in an unsanitary condition.....	173
Plumbing defective.....	503
Water closets defective.....	137
Pits under water closets defective and not water-tight.....	96
Stables inspected, including cow stables.....	4,166
Manure accumulation.....	703
Number of animal permits issued.....	287

Number of animals licensed.....	11
Total number of nuisances found ..	1162
Total number of re-inspections.....	71
Number of inspections for milk licenses	20
Number of inspections for ice licenses	20
Number of inspections for chicken permits. . . . .	4,167
Number of inspections of public and parochial schools...	904
Contagious disease reports delivered to Sunday Schools ..	1,946
Contagious disease cards delivered to doctors . . . . .	200
Number of notices served for other inspectors . . . . .	1,220
Number of cases discontinued on payment of costs and abatement of nuisances .....	228
Number of cases discontinued prior to summons served, the work having been done .....	31
Number of cases discontinued on payment of costs and abatement of nuisances .....	42
Number of cases discontinued prior to summons served, the work having been done .....	43
Number of cases discontinued prior to summons served, the work having been done .....	110

The Sanitary Inspectors make monthly reports of the collection by the Scavenger Contractor of ashes and garbage in their various districts, a copy of which is submitted to the Board of Street and Water Commissioners.

Respectfully submitted,

WILLIAM H. YOUNG,

*Clerk Sanitary Division.*

## THE DIVISION OF PLUMBING.

The work of this Division is carried out by six uniformed inspectors and one chief inspector. Each plumbing inspector has control of all plumbing work carried out in his district as well as the inspection of all house drains and sewers laid, the plans for which are required to be filed with the Board of Health. All such work before completion must be tested and approved by the district plumbing inspector.

## THE WORK OF THE DIVISION.

During the year the number of plans filed was 1,954, of which 110 were rejected. 5,382 plumbing inspections were made and 2,183 water and smoke tests carried out.

## NEW PROBLEMS.

Considerable thought has been given to the problems arising from the installation of new factories upon the meadows. The ground is mostly water soaked and at high tide the water level is within a few inches of the surface. There being no sewage system the problem of efficient sewage disposal from industrial plants has become a pressing concern. A solution has been effected by providing septic tanks wherever possible.

Respectfully submitted,

JOHN L. SULLIVAN,  
*Chief Plumbing Inspector*

## REPORT OF THE DETAILED INSPECTOR FOR RABIES.

There is an excessive proportion of dog bites per person in Newark as compared with cities of greater population. The control of rabies is immediately connected with the prevalence of biting dogs. The control of dogs in the city is a matter of concern to the municipality.

The State law requires local Boards of Health to enforce the Rabies Law of 1915. For this reason local Boards of Health should have the names and addresses of all owners of dogs in the city. In addition a brief description of each dog should be recorded so that in case of an epidemic of rabies all owners could be notified of the necessary quarantine.

The following is a record of the work done during 1915 by the inspector detailed to the Bacteriological Division to investigate suspected cases of rabies. A record in detail of each case and its subsequent history is kept on file at the Laboratory.

Number of persons bitten by dogs.....	541
Number of persons bitten by cats. ....	18
Number of persons bitten by horses.....	6
Number of persons bitten by rats .....	1

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Total number of persons bitten and cases investigated 566

Number of dogs bitten.....	86
Number of cats bitten.....	8
Number of cows bitten and destroyed .....	2
Number of calves bitten and destroyed... ..	6
Number of original inspections... ..	792
Number of reinspections... ..	645
Number of dogs sent to pound .....	143
Number of dogs destroyed.....	138
Number of cats sent to pound.....	12

Number of cats destroyed	12
Complaints of vicious dogs investigated	31
Number of hours in court.	7
Number of final inspections	455
Total number of inspections	1,002

The following table shows the number of persons bitten, suspected animals' brains examined, positive and negative cases and persons given anti-rabic treatment for past six (6) years.

YEARS	Persons Bitten Cases Investigated	Suspected Animals Examined	Positive Cases	Negative Cases	Persons Given Anti-Rabic Treatment
1910	218	33	21	12	40
1911	359	28	13	15	26
1912	536	16	21	25	62
1913	612	43	17	26	41
1914	509	30	7	23	13
1915	566	38 *	8 *	32	3
Totals	2,791	218	87	133	185

\* Two positive cases not examined bodies destroyed.

Respectfully submitted,

CHARLES F. CONRAD,

*Detailed Inspector*

### REPORT OF SPECIAL DETAILED INSPECTORS FOR THE YEAR 1915.

The following visits were made to the Watersheds, Cedar Grove and Belleville Reservoirs to collect samples of our city water supply for bacteriological and chemical examination. Samples of water were also obtained in the Board of Health office and other points in the city as well as from private wells, cisterns, springs and streams in and out of the city for examination

Number of visits made to watersheds..	26
Number of visits made to Cedar Grove Reservoir ....	24
Number of visits made to Belleville Reservoir ..	24
Total .....	74

Samples of city water supply were taken at the following points and delivered to the Bacteriologist and Chemist:

Oak Ridge Stream ...	34
Clinton Stream ..	34
Kanouse Brook ..	34
Fcho Lake Stream .....	34
Macopin Intake ..	34
Cedar Grove Reservoir ..	70
Belleville ..	58
Board of Health Office ..	23
Prudential Building, 763 Broad Street ..	10
145 Jackson Street ..	1

### SAMPLES OF WATER TAKEN FROM PRIVATE WELLS

Arch Street, driven well	2
1st Street, driven well	2
76 Richmond Street, driven well	1
296 Frelinghuysen Avenue, driven well	1
155-157 Summit Street, driven well	2
777 High Street, dug well	1



## OUT-OF CITY SAMPLES OF WELL WATER

Charlottesville, N. J., dug well .. .. .	1
West Milford, N. J., dug well.	1
Newfoundland, N. J., driven well	1
Hilton, N. J., dug well	1
Total	4
Number of inspections made in watersheds .. . . .	35
Calls made in the watersheds .. . . .	19

The toilets on the Susquehanna R. R. cars were found open by the detailed inspectors while passing through the Watershed Restricted Area on February 23rd, April 13th and 27th, and June 23, 1915

Special inspections made.....	11
Inspections made with other inspectors	20
Poultry slaughter houses inspected	20
Lodging houses inspected	5
Dance halls inspected	87
Moving picture theatres inspected	11
Open-air amusement parks inspected	20
Scavenger dumps inspected	11
Wells inspected	6
Cemeteries inspected	-
Baby farms inspected	1
Bird stores inspected.. . . .	10
Public bath houses inspected	1
Slaughter houses inspected	6
Excursion boats inspected	1
Parochial schools visited	25
Dispensary cases investigated	1
Calls made in reference to health matters	77
Time spent in office	75 days
Time on special work.	60
Time at watersheds	53
Time on health matters out of city	5
Time in Court.	36 hours

Number of poultry slaughter houses

Public

1

Private

2

Number of licensed dance halls

80

Number of licensed motion picture theatres

52

Number of licensed open air motion picture theatres

21

Number of public lodging houses

11

Respectfully submitted,

ANDREW J. BRADY,

BENJAMIN CAHILL,

*Detailed Inspectors.*

ANNUAL REPORT  
OF THE  
**Division of Contagious Diseases**  
FOR THE YEAR 1915



# ANNUAL REPORT

OF THE

## Division of Contagious Diseases

FOR THE YEAR 1915

To Charles V. Craster, M. D., D. P. H., Health Officer.

DEAR SIR —I beg to submit the following report of the Contagious Diseases Division for the year 1915.

### OUR POPULATION.

The estimated population for the year is 375,000. The last U. S. Census of 1910 gave the figures 347,469.

### TUBERCULOSIS

Tuberculosis heads the list of communicable diseases reported during the year with 2,146 cases. The following table gives the tuberculosis reported by wards during each month of 1915:

#### TUBERCULOSIS REPORTED BY WARDS 1915

MONTH	1	2	3	4	5	6	7	8	9	10	11	12
January	1	1	1	1	1	1	1	1	1	1	1	1
February	1	1	1	1	1	1	1	1	1	1	1	1
March	1	1	1	1	1	1	1	1	1	1	1	1
April	1	1	1	1	1	1	1	1	1	1	1	1
May	1	1	1	1	1	1	1	1	1	1	1	1
June	1	1	1	1	1	1	1	1	1	1	1	1
July	1	1	1	1	1	1	1	1	1	1	1	1
August	1	1	1	1	1	1	1	1	1	1	1	1
September	1	1	1	1	1	1	1	1	1	1	1	1
October	1	1	1	1	1	1	1	1	1	1	1	1
November	1	1	1	1	1	1	1	1	1	1	1	1
December	1	1	1	1	1	1	1	1	1	1	1	1
Totals	121	121	258	102	115	113	104	76	104	120	77	114

The whooping cough reported to the Board of Health during the twelve months of 1915 amounted to 1,854 cases. This was an increase of 846 cases over the number reported for 1914. The prevalence of whooping cough in 1916 constituted an epidemic, which commenced in November, 1914, with 108 cases. During December of 1914 and for every month of 1915 the number reported per month in the city was never below the 100 mark. The height of the epidemic was reached in the month of September with 225 cases, since which the numbers have declined. A special ordinance was passed by the Board of Health requiring the wearing of a yellow arm band by all children under 10 years suffering from whooping cough and no such child is allowed to appear in public meeting places or public conveyances. This ordinance came into effect September 1st, 1915. The following table gives the whooping cough cases reported by wards during each month of 1915:

## MEASLES.

The number of cases of measles reported to the Board of Health during 1915 was 1,465. This constitutes a particularly low record and much below 1914, when the number was 5824. Measles cases reported by wards during the various months of 1915 are shown in the following table:

## MEASLES REPORTED BY WARDS 1915.

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
January	2	1	0	1	1	0	1	2	4	1	.....	0	0	0	0	4	20
February	2	5	2	4	1	.....	3	2	1	1	3	2	.....	2	.....	2	28
March	4	1	1	.....	0	1	1	1	2	.....	1	1	3	5	.....	4	27
April	1	3	1	1	3	.....	5	2	4	1	1	7	1	1	1	2	33
May	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	10	.....	.....	.....	.....	12
June	2	1	21	.....	6	1	3	1	11	6	3	9	25	9	4	102	162
July	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
August	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
September	1	.....	5	.....	2	1	.....	5	3	9	1	9	2	1	.....	2	41
October	.....	.....	7	1	15	1	.....	.....	16	.....	11	2	4	2	3	.....	62
November	.....	2	12	2	54	2	.....	3	11	70	1	80	12	7	.....	54	290
December	2	2	52	18	163	8	8	12	58	115	6	52	11	37	2	68	639
Total	1	1	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,465

## MUMPS

Mumps cases reported amounted to 1,460, which was an increase of 811 over 1914. The incidence of this disease during the spring months is well shown in the table, 1,233 cases being reported during the first six months of the year:

## MUMPS REPORTED BY WARDS 1915.

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
January	19	2	31		3	16			2	6		1					
February									20	10	8	3	7	22	4		
March								13	2	15	11	12	4	18	21	7	8
April								1	33	25	16	8	19	9	19	1	
May								37	7								
June							3	9	3	15	4	17	10	19	4		4
July								5	1	1	1	5	4	2	2	4	
August								1	2	5		1	1		3		26
September								2		1		1		7	3	2	29
October								3					4	1		1	21
November				1				9	2	2	1	2	1	6	3	1	37
December								6		6	3	2	3	15		2	55
Totals	80	1	327	5	67	86	35	127	65	107	49	37	65	167	26	15	140

## SCARLET FEVER

The scarlet fever cases reported during 1915 amounted to 618, the lowest recorded in ten years. The following table shows the prevalence of the disease since the year 1894

## SCARLET FEVER CASES SINCE 1894

Year	Cases	Year	Cases
1894	1,145	1906	616
1895	623	1907	773
1896	537	1908	1,500
1897	1,358	1909	1,786
1898	478	1910	1,664
1899	607	1911	1,027
1900	708	1912	698
1901	643	1913	1,036
1902	557	1914	1,696
1903	779	1915	618
1904	1,649		
1905	1,309	Total	21,807



The following table gives the cases of scarlet fever reported by wards during each month of 1915.

## SCARLET FEVER REPORTED BY WARDS 1915.

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
January	1																84
February	1		4	2		4		1		1		4	4	7			60
March	1		3	3	2	3	3	2	1	1	4	6	10	3	1		92
April	1		14	1				8	8	8	5		5	3	2		83
May	1		1	6	1	1	1	1	3	1		2		4	1	4	37
June	1					4	1	1	2		4			1		7	26
July	1		1	1	2					4	1	2		2	1	1	17
August	1		1	1					1					4	2		13
September	3	1					3	1	1	1			2	1			15
October						1		1	1			1	1			6	33
November				12	2	2	3	1	1	6			7	7	1		41
December	4		10	1						4	1		1			6	29
Total	27	7	13	2	34	17	42	15	14	29	28	41	31	16	7		618

## DIPHTHERIA.

There were 1,212 cases of diphtheria reported in the city during the year. This number was 283 less than in 1914.

The following table gives the occurrence of the disease in the city since 1895:

Year	Cases	Year	Cases
1895 .....	1,321	1906 .....	1,313
1896 .....	1,261	1907 .....	1,432
1897 .....	969	1908 .....	800
1898 .....	1,019	1909 .....	1,323
1899 .....	1,170	1910 .....	828
1900 .....	1,417	1911 .....	1,339
1911 .....	1,154	1912 .....	1,328
1912 .....	985	1913 .....	1,564
1913 .....	1,150	1914 .....	1,403
1914 .....	1,083	1915 .....	1,212
1915 .....	1,014		

The following table gives the occurrence of the disease by months and wards during 1915:

### DIPHTHERIA REPORTED BY WARDS 1915

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
January	14	2	22	1	4	11	2	6	11	4	9	5	19	18	3	12	146
February	7	4	21	3	4	8	4	3	8	15	3	2	9	17	8	12	138
March	19	5	17	4	4	14	3	4	7	10	5	4	21	23	1	17	160
April	4	6	10	6		5	4	1	2	4	1	7	5	11	3	6	90
May	8	3	8	5		5	3	2	3	6	13	5	7	7	5	3	83
June	4	1	4	3		4	7	1		4	1	1	6	5	6	1	51
July	2		5			6	1	1	2	2	2		1	11	2	1	58
August	3	11	2	3	1	2	1	4	2	3	1	10		2	2	4	51
September	1	1	12	2	6	4	2	5	6	2		3	13	5	3	6	71
October	3	4	10			3	5	2	3	7	6	2	8	14	12	2	90
November	11	2	11	2	4	10	7	5	3	8	8	5	10	9	7	11	112
December	5		32	2	2	10	13	10		5	15	6	9	17	16	5	160
Total	108	59	149	41	28	104	41	36	58	101	41	66	74	74	28	128	1488

### TYPHOID FEVER.

There were 108 cases of typhoid fever reported during the year, being the lowest number recorded for eighteen years:

Year	Cases	Year	Cases
1894	89	1906	336
1895	149	1907	330
1896	106	1908	181
1897	103	1909	216
1898	176	1910	178
1899	215	1911	208
1900	211	1912	173
1901	310	1913	217
1902	288	1914	280
1903	330	1915	108
1904	214		
1905	228	Total	4488

## TYPHOID FEVER REPORTED BY WARDS 1915.

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	1	12	15	16	Total
January			1					1									2
February		1								1							2
March		1															1
April			1								2						3
May			1														1
June			1			1		1	1								4
July			1	2		1		3		2	1	1		1			10
August			1	2		4	1	1		2				2	4	1	17
September			1	3	1		1	1	2			2		1			12
October				2						1	2	2	1				6
November			1	1	2	1				1					2	2	12
December				1					1		2		1		1	1	7
Total	7	7	14	9	15	8	9	8	4	6	5	5	4	8	4	8	108

## CHICKEN POX (OR VARICELLA).

There were 1,400 cases of chicken pox reported throughout the year. The prevalence of the disease is associated with the winter and early spring months.

## CHICKEN-POX REPORTED BY WARDS -1915.

MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
January	24	2	3		4	12	14	10	8	12	12	5	24	1	11	28	209
February		4	34	1		14	8	16	14	1	12		24	11	21	19	229
March		9	2	1	4	9	8	2	0	6	18		13	13	4	15	169
April		3	2	1		4	15		7	4	9	4	1	14	15	8	175
May		19	1	1	8	3	7	5	6	14		4	5	11	3	11	158
June		6			7	4	5	2	4	7	6	3	2	9	19	1	116
July		1		16	2							2	1		4	1	43
August				1	1	3	1	2						1			11
September				1				1	2				1	2	1	1	10
October		3	1	4		2	1			3	1			14	1	2	34
November		2	2	4		3	2	1	2	9	1		6	2	12	1	68
December		5	5	6		2	4	3	10	30	6	4	16	7	15	1	140
Total	114	64	194	26	41	89	50	108	160	60	90	43	107	131	54	156	1400

## INFANTILE PARALYSIS.

Twelve cases of infantile paralysis were reported during 1915. Our record of the disease is as follows:

Year	Cases
1910	7
1911	33
1912	0
1913	24
1914	2
1915	12

## PURULENT OPHTHALMIA.

There were 27 cases of ophthalmia neonatorum reported in the city during 1915.

1913	29 cases
1914	30 cases
1915	27 cases

## EPIDEMIC MENINGITIS.

During the year 17 cases of epidemic meningitis were reported, with 14 deaths. The following table shows the occurrence of the disease and the high mortality of the disease since 1905.

Year	Cases	Deaths
1905	110	90
1906	25	20
1907	55	38
1908	11	11
1909	8	7
1910	3	1
1911	7	5
1912	7	5
1913	17	8
1914	16	8
1915	17	14

## MALARIA.

Malaria, formerly a disease much more prevalent in the city, still exists to some extent, 57 cases of the disease being reported during 1915, which is an increase of thirteen over the number reported in 1914. The following is a list of the monthly incidence:

## MALARIA—1915.

Month	Cases	Month	Cases
January .....	2	August .....	10
February .....	1	September .....	11
March .....	2	October .....	9
April .....	2	November .....	2
May .....	4	December .....	2
June .....	6		—
July .....	6	Total .....	57

## TRACHOMA

There were 39 cases of trachoma of the eyes reported during the year, showing a decrease of 27 over the number reported during 1913.

## INDUSTRIAL DISEASES.

Under the State Laws, Chapter 357, Laws of 1912, the following occupational diseases were reported during the year 1915. The table below gives the comparison between 1913, 1914 and 1915:

Disease	1913	1914	1915
Lead poisoning .....	40	48	34
Arsenic poisoning .....	1	2	
Mercury poisoning .....	1	..	1
Compressed air disease	1	.	1
Phosphorus poisoning .....			1

## MENTAL DEFICIENCY AND EPILEPSY.

Under the State Laws, Chapter 182, Laws of 1912, physicians are required to report all cases of epilepsy and mental deficiency coming to their notice. The following table gives the number reported for three years:

Disease	1913	1914	1915
Epilepsy .....	42	62	32
Mental deficiency	109	61	79

Respectfully submitted,

JOHN J. GREENE,

*Clerk*



Operation of the X-ray



Experiment of the X-ray





# ANTI-TOXIN AND CULTURE STATIONS BY WARDS

Ward	STATION	Street and Number	Telephone No.
First	A. R. Bland	Seventh Avenue and St. Field Street	147 B B
First	W. R. Seidner	96 Belleville Avenue	111 B B
First	Second Precinct Police	Schuyler and Seventh Avenues	540 Market
Second	St. Mary's Hospital	Central Avenue and High Street	500 Market
Second	City Dispensary	Plate and William Streets	807 Market
Second	C. Holzhafer	Broad and Market Streets	111 Market
Second	E. P. Fielding	925 Broad Street	914 Mulberry
Second	C. W. Monk	10 Market Street	241 Mulberry
Second	First Precinct Police	Court and Washington Streets	540 Market
Third	St. Rulaback's Hospital	681 High Street	1 Market
Fourth	Firemen's Pharmacy	Broad and Market Streets	511 Market
Fourth	A. E. Sayre	482 Broad Street	654 Market
Fourth	Max Lewitt	Broad and Fulton Streets	1871 Market
Fifth	L. M. Greenfield	261 Walnut Street	3908 Market
Fifth	Seidler's Drug Co	21 Ferry Street	8641 Market
Sixth	J. P. Smit	15 South Orange Avenue	1514 Mulberry
Sixth	L. L. Staehle	169 South Orange Avenue	1559 Market
Sixth	City Hospital	Fairmount Avenue	9300 Market
Seventh	D. Strauss	62 Springfield Avenue	4655 Market
Seventh	P. J. Corrigan	25 Wallace Place	3265 Market
Eighth	Ellwood Pharmacy	190 Washington Avenue	1091 B B
Eighth	Oriental Pharmacy	289 Belleville Avenue	453 B B
Eighth	H. J. Quin	187 Bloomfield Avenue	269 B B.

# ANTI-TOXIN AND CULTURE STATIONS BY WARDS *Continued*

Ward	STATION	Street and Number	Telephone No.
Eight	Eighth Precinct Police	Washington Avenue	5400 Market
Ninth	Geo. L. Innett & Bro	77 Lincoln Park	3054 Mulberry
Tenth	G. F. Tempel	10 Clinton Avenue	818 Waverly
Eleventh	J. B. Foster	Orange Street and Roseville Avenue	151 B. B.
Eleventh	Fifth Precinct Police	Orange and Sixth Streets	5000 Market
Twelfth	O. Scholz	131 Hamburg Place	1000 Market
Twelfth	O. Von G. Ehrst	200 Ferry Street	10000 Market
Twelfth	Bowery Pharmacy	28 Fleming Avenue	10000 Market
Twelfth	Third Precinct Police	Van Buren Street	5000 Market
Thirteenth	A. Marquer	1041 South Orange Avenue	2878 Mulberry
Thirteenth	A. R. Hen	661 Springfield Avenue	2444 Waverly
Thirteenth	Seventh Precinct Police	South Orange Avenue	5400 Market
Fourteenth	F. L. Feind	50 Belmont Avenue	2194 Waverly
Fourteenth	Aug. Koelble	12 Springfield Avenue	1534 Waverly
Fourteenth	Fourth Precinct Police	Seventeenth Avenue	5400 Market
Fifteenth	F. Broch	468 Central Avenue	3301 Market
Fifteenth	L. H. G. V.	Central Avenue and Fifth Street	151 B. B.
Fifteenth	C. P. Moll	165 Central Avenue	1319 Market
Sixteenth	H. H. G. V.	71 Clinton Avenue	2408 Waverly
Sixteenth	G. J. Keller	191 Avon Avenue	1103 Waverly
Sixteenth	W. J. Witt	821 Clinton Avenue	2871 Waverly
Sixteenth	Seventh Precinct Police	Hunterdon and Bigelow Streets	5400 Market

## CULTURE COLLECTORS

John F. Dunn	55 South Seventh Street
William J. Foyle	142 Hudson Street

## REPORT OF DISINFECTING STAFF 1915

*Charles V. Craster, M. D., D. P. H., Health Officer:*

DEAR SIR—The activities of the Disinfecting Staff have been considerably increased since September, 1914, when the new ordinance requiring the wearing of arm bands by children suffering from whooping cough came into effect. The number of visits paid to quarantined houses by the Inspectors increased from 2,859 in 1914 to 5,445 in 1915.

The following is a detailed account of the work done during the past year, as compared with the previous year.

## HOUSES QUARANTINED

	1914	1915
Diphtheria, including membranous croup, placarded .....	1,407	1,203
Scarlet fever, placarded .....	1,695	1,878
Typhoid fever, not placarded .....	242	97
Cerebro-spinal meningitis .....	16	16
Infantile paralysis .....	7	9
Whooping cough .....	0	611
Total number of cases .....	3,367	2,544

## DISINFECTIONS.

Diphtheria, including membranous croup ....	1,312	1,145
Scarlet fever .....	1,575	765
Tuberculosis .....	516	750
Cerebro-spinal meningitis .....	12	21
Infantile paralysis .....	3	3
Special .....	807	735
Total number of houses .....	4,175	3,119

Number of rooms disinfected	12,798	9,765
Number of cubic feet of air space	1,18,000	10,035,000
Number of control tests	1,733	1,028
Number of visits to quarantined houses	2,859	5,445
Number of nuisances found	88	179
Number of funerals supervised	49	32

Respectfully submitted,

SAMUEL KNOTT,

*Chief Inspector.*

## REPORT OF THE DIVISION OF FOOD AND DRUGS

*Dr. Charles V. Craster, Health Officer, Newark Board of Health, Newark, N. J.*

DEAR SIR:—Herewith I beg to submit the report of the Division of Food and Drugs for the year 1915:

*Duties of the Division.*—The work of the Division is mainly concerned in the supervision of the food supply, and the enforcement of the State Laws and City Ordinances relating to the adulteration of all food and drugs as well as supervision over the sale of milk in the city, the sanitary conditions of places where food is prepared and the methods employed in the handling of food, and the control of food exposures.

*Divisional Staff.*—The routine work of the Division is carried on by one Chief Inspector of Food and Drugs, three deputy inspectors, one stenographer, the meat inspector and the veterinarian, although under the Sanitary Division, do most of their work in this Division.

*Exposure of Food.*—The exposure of food products and the requirements for the clean handling of our food are well covered by the State Sanitary Act of 1909. The enforcement of this law, however, requires the constant vigilance of the inspectors for the reason that much food is sold on the streets from pushcarts and sidewalk stands usually by a careless and ignorant class of itinerant vendors.

*The Pretzel Boy.*—A particularly unhygienic seller of foodstuffs is the pretzel boy. These boys are irresponsible, dirty, frequently diseased and should not be allowed to handle any food for sale to be consumed in the condition as sold. An active movement against this undesirable seller of food has been prosecuted vigorously. Some improvement has been effected, most of the boys now having glass covers over their wares, but their bodily condition has not shown much improvement and it is a question whether the sale of food under these circumstances is not a violation of the pure food laws of the State.

*The Milk Supply.*—The most important work of this Division has been the supervision of the milk supplied to the city. The grades of milk coming into the city and its quantity are as follows:

#### GRADES OF MILK

All milk sold in the City of Newark is under the control of the Board of Health and is graded in the following manner:

*Certified Milk.*—Produced under the direction of the Medical Milk Commission.

*Grade A, Raw.*—Produced from tuberculin tested cows and dairies scoring not less than 65% on the Government Score Card. Bacterial limit, 100,000 per c. c.

*Grade A, Pasteurized.*—Produced from cows free from disease and from dairies scoring not less than 65% on the Government Score Card. Bacterial limit, 30,000 per c. c.

*Grade B, Pasteurized*—Produced from cows free from disease and from dairies scoring not less than 40% on the Government Score Card. Bacterial limit, 50,000 per c. c.

*Grade C Milk* This milk is used for cooking or industrial purposes. Bacterial limit more than one million per c. c., and produced from dairies scoring less than 40% on the Government Score Card. This milk is required to be heated to 200° Fahrenheit for two minutes before sale.

*A Start Made in Inspecting Dairies.*—The first five months of the year practically no dairy inspection was done except those in our city or suburbs, which could be reached by trolley or automobile. This was on account of the lack of assurance of money to be appropriated for this work. In June a commencement was made in scoring dairies at Papakating, N. J., and two inspectors from this Department continued on this work until December 24, 1915, scoring 1,735 dairies and 67 creameries.

*Better Supervision of Milk Licenses.* Previous to this year any vender could obtain a milk license for \$2.00, but in order to obtain a regular license for grade A raw milk, a certificate of the tuberculin test of the cattle producing the milk had to be furnished, the dairy was required to score 65% or more and the sterilization of all the bottles in which this milk must be sold, was required.

*Pasteurized Milk Supervision.*—For a license for grade A pasteurized milk the pasteurizing plant must first be approved by this Board, dairies inspected and should average 65% or more and the sterilization of all the bottles in which this milk must be sold required. On these two grades of milk the work is almost completed and we know today who can be licensed to sell both these grades, which was unknown until now.

*Grade B Pasteurized Milk Supervision.* For a license to sell grade B pasteurized milk the pasteurizing plant must first be approved by this Board. Dairies inspected and must average 40% or more. On this grade of milk we have been unable to grant very many licenses on account of the objection of the attachment to the milk ordinance compelling dealers to sell all-bottled milk.

The amount of milk supplied to the city daily averages 135,000 quarts. The supply may be estimated as follows under the following grades:

Raw milk, 45,000 quarts. (Suburban dairies, 40,000 quarts, city dairies, 5,000 quarts.)

Certified milk, 800 quarts.

Grade A pasteurized milk, 7,500 quarts.

Grade B pasteurized milk, 80,000 quarts.

Grade C (heated) milk, 1,700 quarts.

The raw milk is mostly a city supply and is produced from the 3,000 cows in the 110 dairies in the city and suburbs. These cows are all required to be tuberculin tested. The pasteurized milk is produced from 3,000 farms in New Jersey, New York and Pennsylvania and is shipped by rail to the city by the Delaware and Lackawanna, the Erie, Lehigh Valley and Central railroads. At the present time the bulk of this milk is pasteurized at creameries in the neighborhood where it is produced.

*Sale of Loose Milk Will Be Prohibited.* This will be accomplished when the two large pasteurizing plants are completed in this city. This puts six of the largest wholesale dealers in two plants. This will also put bottled milk in Newark and will bring pasteurization close at home where we will have absolute supervision over same.

*An Inspection of Soft Drink Factories.* -In 1912 the soft drink factories in the city were inspected by the Food and Drug Department and a number of samples taken and analyzed, and found in most cases to contain saccharin and highly colored coal tar dyes. It was found that in many cases soft drinks were being prepared in cellars of tenement houses, stables, sheds and yards where the sanitary conditions were undesirable.

*Conditions Found Suggested New Law* In consequence of the conditions found in these places the co-operation of the State Board of Health was asked and in 1914 a bill was drafted and became a State Law regulating the sanitary condition of all soft drink factories.

*Inspection Under New Law.* During this year the State Board of Health in conjunction with this Department started to enforce this law. Of the thirty-three establishments inspected, two were compelled to permanently cease manufacturing non alcoholic beverages and several were compelled to stop temporarily. Every place visited, some improvements were recommended.

*Analysis of Soft Drinks.* There were twenty nine samples of soft drinks taken by this Department and seven of these were found to contain saccharin. Law suits are now pending against six of the offenders. The State, in company with this Department, took nine samples and found three to contain saccharin. In four places inspected, 34½ cases and 3,005 bottles of soft drinks were destroyed.

It is a generally held opinion that there is not a food and drug law on the statute books which has produced such good results in so short a time.

*Miscellaneous Inspections and Condemnations*—During the year a number of eggs of the rots and spots variety were seized and condemned by inspectors from this Department. These foul-smelling eggs were to be used in pastry,



licking of white bread and the glazing of rye bread. This seems to be, unfortunately, quite a common practice in the city, as we have had occasion to catch the same parties offending several different times. Several law suits against these offenders are now pending.

*Stands and Push-carts*—There has, also, been quite an improvement where we have warned persons selling soft drinks on stands and push-carts to provide proper means for washing glasses in running water instead of rinsing the same in a vessel of dirty water.

#### RESTAURANT KITCHENS.

In November of this year the Department commenced an investigation of the condition of the restaurant kitchens in this city, and after visiting thirty nine it was found that the majority were in a most deplorable condition, with only a few clean and up to date. For the purpose of standardizing requirements the Department adopted a score card, which is now in use, and which has also been adopted by some of our nearby cities.

*Score Card and Certificate of Approval*.—A restaurant rating 70% or more is eligible to obtain, at a cost of \$5.00, a certificate of approval, which certifies to the sanitary condition of the equipment and methods employed in the place named on the certificate. This certificate is void if upon reinspection the Department finds the restaurant to be below the standard required by this Board. Twenty-two of these certificates were issued during 1915, and three restaurants scored perfect marks according to the score card adopted by this Board. A realization of the improved sanitary condition of restaurant kitchens affected by this work cannot be appreciated, except by those familiar with the former conditions prevailing in these restaurant kitchens or by those who have had occasion to visit them.

DETAILED REPORT OF THE FOOD AND DRUG  
DIVISION FOR 1915

Number of chemical samples taken . . . . .	815
Number of preliminary samples taken.....	569
Number of sediment tests taken . . . . .	183
Number of bacteria samples taken (routine)....	2,251
Total number of samples taken for streptococci and various other conditions in milk.....	1,000
Number of complaints investigated . . . . .	63
Number of complaints verified . . . . .	103
Number of complaints, no cause.....	58
Number of complaints pending. . . . .	2
Number of dairies scored. . . . .	1,783
Number of creameries scored . . . . .	67
Dairies re-inspected . . . . .	151

This department started inspection of dairies at Papa-  
kating, N. J., on June 2, 1915

Total cost of dairy inspection . . . . . \$1,472.51

Dairy farthest away from this city is Yale, N. Y., which  
is located 396 miles away from Newark, N. J.

Amount of money collected for milk penalties . . . . .	\$1,145.00
Fines collected cost of doing . . . . .	\$ 1,000.00
Fines remitted . . . . .	\$ 19,000.00
Number of restaurants scored . . . . .	6
Number of restaurants re-inspected . . . . .	26
Amount . . . . .	\$ 1,000.00
Number of soda-water factories taken . . . . .	19
Number of milk samples below the standard . . . . .	2
Number of butter samples taken . . . . .	1
Number of miscellaneous taken . . . . .	6
Number of bakeries inspected . . . . .	10
Number of soda-water factories inspected with State In- spector . . . . .	10
Number of soda-water factories re-inspected.. . . .	10



*A Nearby Dairy Before Inspection*



*The Above Dairy as Improved by Recommendation of our Inspectors*



## BOARD OF HEALTH.

65

Number of cases turned into Legal Department for suit .	22
Number of notices served for supplying running water at soda fountains, . . . . .	7
Number of milk bottling plants inspected . . . . .	64
Number of food exposure violations (pretzels) . . . . .	95
Inspection for food exposures, . . . . .	132
Number of persons who appeared before the Food and Drug Committee to answer charges of various violations of our Food and Drug Laws, . . . . .	198

Respectfully submitted,

SAMUEL G. SHARWELL,

*Chief Inspector.*

## REPORT OF THE MEAT INSPECTOR

FOR THE YEAR 1915

The following number of carcasses were inspected:

Beef	100
Lamb and sheep	87,007
Calves . . . . .	107,007
Hogs . . . . .	11,87
Total	199,087

Centre Market and the commission houses on Commerce and Mulberry Streets were inspected daily. The beef houses and butcher shops were also inspected regularly. Was detailed sixteen days inspecting restaurants with the Food and Drug Inspectors.

Three storekeepers were turned in for suit, having poultry exposed for sale.

Respectfully submitted,

DANIEL KUHN,

*Meat Inspector.*

## REPORT OF VETERINARIAN—1915

During the year regular visits to the different slaughter houses were made and a number of complaints of cases of communicable disease in animals were reported and investigated.

There are at the present time eight slaughter houses in the City of Newark, three of which have government inspection.

The following is a summary of the work performed by the Veterinarian during the year:

Cattle inspected..	11,855
Calves inspected ..	12,787
Sheep inspected	115
Hogs inspected	200
Carcasses of beef condemned	18
Carcasses of calves condemned	10
Carcasses of sheep condemned	3
Carcasses of hogs condemned...	10

The results of the investigations of the reported cases of communicable diseases were as follows.

Rabies in a horse, 1 case

Glanders in horses, 15 cases

In every case the animals were killed and the stables, harness and other utensils, and the blacksmith shops where these animals had been shod were thoroughly cleansed and disinfected under the direction of Inspectors Keating and Conrad.

Respectfully submitted,

WERNER RUNGE,

*Veterinarian*

ANNUAL REPORT  
OF THE  
**Division of Bacteriology**  
FOR THE YEAR 1915





# REPORT OF THE DIVISION OF BACTERIOLOGY 1915

*Charles V. Craster, M. D., D. P. H., Health Officer.*

DEAR SIR —Herewith is respectfully submitted the report of the Division of Bacteriology for the year ending December 31, 1915

## DIPHTHERIA AND TYPHOID FEVER DECREASING.

The year has been marked by a comparatively low incidence of Diphtheria and Typhoid Fever in Newark, the two diseases for which the laboratory is most frequently called upon by physicians for aid in the early diagnosis

## TUBERCULOSIS SPECIMENS INCREASE.

There was a decided increase in the specimens examined for Tuberculosis, the number being nearly a thousand more than the previous year.

## THE CITY WATER

The routine examinations of the City Water made at frequent intervals during the year show that the Pequannock supply maintained a remarkably high degree of bacterial purity. This was reflected in the absence of intestinal disorders in Newark.

## FREEDOM FROM RABIES

This city has been practically free from rabies during the year, only one dog and one horse were found infected with the disease throughout the whole year, although the brains of 25 dogs, 3 cats, 1 horse and 1 calf were examined. However, attacks of vicious dogs on human beings constantly occur, necessitating careful investigation of every case reported.

## INCREASED MILK EXAMINATIONS

Perhaps the most important step taken by the Board during the year, so far as the Bacteriological Laboratory is concerned, was the provision for a more extensive examination of the milk supply. More help has been provided and new equipment furnished, especially for this work. The results thus far show that almost 200% more samples of milk were examined this year than last.

The following table gives a summary of the routine work for 1915:

# BACTERIOLOGICAL LABORATORY RECORD FOR 1915

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
<b>Diphtheria</b> —													
Primary cultures examined	724	746	859	48	586	131	334	46	44	513	548	588	7,188
True cases	129	92	14	59	51	36	34	35	39	6	72	88	732
Total number of cultures examined	925	926	1,155	811	1,090	564	599	506	530	676	662	640	8,623
<b>Diphtheria Antitoxin</b> —													
On hand January 1, 1915	657												
Number of doses produced	165	321	121	181	178	0	288	0	0	409	287	749	1,964
Number of doses distributed	398	324	419	212	263	145	145	149	195	329	388	404	3,492
<b>Tuberculosis</b> —													
Specimens of sputa examined	276	216	261	251	140	216	251	342	346	316	288	386	3,336
Specimens containing tubercle bacilli	74	52	6	56	56	63	144	91	144	114	116	129	788
<b>Blood examinations (typhoid &amp; malaria)</b>	43	43	74	71	61	47	139	142	104	97	72	56	968
Specific catarrhal infection examinations	59	62	91	63	64	45	61	98	54	65	81	97	840
<b>Milk examinations</b>	8	67	105	144	84	95	119	27	344	11	294	27	2,094
<b>Water examinations</b>	17	11	23	28	28	24	22	24	25	24	11	24	264
<b>Disinfection tests</b> —	130	108	148	123	141	63	56	58	43	58	80	117	1,065



Using Syringes with Diphtheria Antitoxin at City Hospital.

#### DIPHTHERIA ANTITOXIN

During 1915 there were 1,107 cases of diphtheria reported in Newark, and of this number 1,085 cases were treated with diphtheria antitoxin. There were 192 of the above cases removed to and treated at the Essex County Isolation Hospital at Soho, where 29 died, a mortality for the institution in Newark cases of 15.10%, while 893 cases were treated in Newark with Board of Health antitoxin of which 19 died, a mortality of 2.12%. This makes the total mortality of antitoxin treated cases for Newark 4.42%.

The records for the year show that no antitoxin was used in 22 cases of diphtheria, 4 of which died, a mortality of 18.10%.

The following table is self explanatory:

## DIPHTHERIA

Antitoxin Used				Antitoxin Not Used			
Period	Cases	Deaths	Per Cent	Period	Cases	Deaths	Per Cent.
1895 to } 1900	3,296	357	10.8	1895 to } 1900	2,441	528	21.6
1900 to } 1905				1900 to } 1905			
1905 to } 1910	5,070	365	7.2	1905 to } 1910	1,289	256	19.8
	5,348	323	6.0	1905 to } 1911	622	144	23.0
Year				Year			
1910	1,252	80	6.3	1910	133	24	18.0
1911	1,241	56	4.5	1911	92	18	19.5
1912	1,065	76	7.5	1912	93	15	16.1
1913	1,480	89	5.97	1913	105	21	20.0
1914	1,411	78	5.5	1914	82	11	13.4
1915	1,085	48	4.42	1915	22	4	18.1

The following report upon specimens sent in for the diagnosis of Tuberculosis during 1915 is submitted by Dr. Ripley, First Assistant Bacteriologist

## TUBERCULOSIS

DEAR SIR The number of examinations of sputa made at the laboratory from suspected cases of tuberculosis for the year 1915 was 3,396, this being the largest number since the laboratory was established

Tubercle Bacilli were found in 980 samples, or 29%, and 2,416 were negative. The percentage of positive cases found, however remained practically the same, as the following table for the past ten years will show

YEAR	Positive	Negative	Total	Percentage of Positive Cases
1896	76	1,787	2,125	34
1897	101	1,455	2,176	34
1898	123	1,786	2,107	34
1899	878	1,663	2,521	34
1900	771	1,744	2,517	30
1901	680	1,644	2,335	29
1902	677	1,820	2,617	30
1903	489	1,999	2,620	27
1904	678	1,766	2,414	26
1905	98	2,341	3,396	29

The physicians for whom the examinations were made furnished data regarding the sex and age in 641 cases in which Tubercle Bacilli were found. Four hundred and eighteen, or over 65% of these were males and 223, or over 34%, were females.

The following table for the last ten years shows the sex and time of life in which tuberculosis occurred

YEAR	1 to 10 Years		10 to 20 Years		20 to 30 Years		30 to 40 Years		40 to 50 Years		50 to 60 Years		60 plus Years		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1907			26	29	110	15	6	50	7	17	33	5	8	2	327
1908			25	21	116	71	11	37	29	70	25	5	6	4	402
1909			40	20	8	7	15	7	68	21	27	11	5	6	569
1910	1		28	32	111	8	13	11	11	30	35	8	18	7	36
1911			35	22	153	11	6	60	38	23	22	12	5	1	347
"			29	33	151	7	5	8	61	14	25	8	7	6	416
1912	1		30	34	111	28	11	77	6	18	51	4	15	5	714
1913			25	25	113	16	39	78	4	8	50	1	19	1	653
1914			33	28	119	16	10	8	30	32	11	6	3		556
Total	2	3	25	34	121	84	60	50	87	3	52	11	21	3	641
Totals	2	3	306	259	704	714	1107	595	747	221	212	81	104	46	3331
Per Cent	0.2		9.5		33.0		30.0		16.0		7.3		11		

The records of the year show that 86 victims had cases of tuberculosis in the immediate family.

Respectfully submitted,

DR. THOMAS H. RIPLEY,

*Assistant Bacteriologist*

## BACTERIAL VACCINES

Typhoid Vaccine and Whooping Cough Vaccine are prepared at the laboratory for free distribution in Newark, and upwards of 300 doses of the former and 45 doses of the latter have been used during the year.

This is the first year that Whooping Cough or Pertussis Vaccine has been prepared by our board, and regarding the process of manufacture the following description has been prepared by Dr. H. A. Tarbell, Second Assistant Bacteriologist:

*To the Honorable, M. D., Bacteriologist*

DEAR SIR: In September of this year the laboratory began the manufacture and distribution of vaccine for immunization and treatment of whooping cough. Vaccine is made by growing the Bordet-Gengou Baccillas on blood agar slants, emulsifying with salt solution and killed at 56° C. by immersion in the water bath. Dilutions of this emulsion are made with normal salt solution containing 1-3 of 1% tricresol, the product being finally bottled in individual containers of 1 C. C. each.

The vaccine is put up in doses of 250 million, 500 million, and 1,000 million bacteria, the contents of the vial to be injected subcutaneously every third day. A slight local reaction about the site of injection, which disappears in 24 hours, may result though reports from our local physicians have not shown it to be constant. The Board of Health published a circular which was sent to all physicians in the city explaining its use.

The prevalence of the disease in Newark led the Board to think that there would be a greater demand for the product than has been shown by the small number of doses distributed. The vaccine is free to residents of Newark and physicians may procure a supply by applying at the laboratory. Personal observations by physicians who have used the vaccine seem to vary considerably, some being enthusiastic others claiming it has done little good.

Respectfully,

H. A. TARBELL, M.D.

*Assistant Bacteriologist*



## CITY MILK SUPPLY

The following report, giving a detailed description of the methods employed at the laboratory in examining the samples of milk, has been prepared by Dr. G. Ward Dibrow, Third Assistant Bacteriologist:

The milk supply received special attention during the past year and some important results have been obtained which appear to justify the increased expense of this step by the board.

## PUS AND STREPTOCOCCI IN MILK FREQUENT

For instance, there have been a number of cases in which pus and streptococci were found in samples of mixed milk, that is to say, the combined product of several cows or even of several dairies. In almost every instance of this kind it has been possible for the investigators of our Board, guided by the microscopic findings of samples of milk from the suspected dairy, to trace the infection to the individual cow and order its removal from the herd. Some animals were so badly infected that it savors of criminal carelessness on the part of the dairymen to serve innocent consumers with the product of such animals and sell it under the name of milk.

## CRIMINAL CARELESSNESS IN MILK PRODUCTION

It seems incredible that men would continue to draw milk from some of the cows that have been found by Inspectors of our Board, mix it with milk from healthy animals and sell it to be consumed, probably by innocent children and delicate invalids. Several instances of this kind have been found in which the most superficial examination would satisfy anyone who attempted to milk the animal that the udder was badly diseased, and in these cases the microscope showed the product to be teeming with streptococci or pus producing germs, and the fluid almost entirely composed of pus and blood.

## ROUTINE EXAMINATION OF HERDS NECESSARY

These cases illustrate the necessity for a thorough examination of every milk producing animal in the herd, or the absolute pasteurization or even sterilization of all milk unless the individual history of every animal is certified to.

## MILK ANALYSIS.

*To R. V. Connolly, M. D., Bacteriologist:*

DEAR SIR.—During the year commencing January 1st and ending December 31st, 1915, the routine examination of the city milk supply has been continued in much the same manner as in preceding years. In addition, certain other examinations have been made which are consistent with the modern trend of thought along bacteriological lines. For purposes of clearness each sub-division of the work—namely, routine examinations, room temperature counts, examinations for streptococci, for colon bacilli, and for acid fast bacilli will be described as separate entities under appropriate headings.

*Routine Examinations.*—These have been conducted, as in preceding years, along lines laid down by the Committee on Standard Methods of Bacterial Milk Analysis of the American Public Health Association. Each sample is collected by the Inspector from the dealers' milk supply by means of a sterile pipette. The sample thus collected is placed in a sterile test tube, which is given a serial number, and enclosed in an ice filled container in which it is transported to the laboratory. In this connection I wish to emphasize the fact that the dealer from whom the sample is collected is known only to the Inspector, inasmuch as the samples, as received at the laboratory, bear only the serial number. In addition, the icing of the sample keeps it at a temperature at which the multiplication of bacteria is impossible, thus insuring the fairest possible treatment of the milk dealers.

During the year just ended 2,238 samples have been brought to the laboratory for routine examination; of these 2,144 were examined and reported to the Board of Health. The remaining 94 samples comprise special examinations, samples destroyed in transit, etc., as may be seen from the accompanying table:

ROUTINE EXAMINATIONS	Number	
	of	Per Cent.
	Samples	
Samples containing 50,000 bacteria per C. C. and under	1,167	54.43+
Samples containing over 50,000 up to and including 100,000 per C. C.	267	12.45+
Samples containing over 100,000 up to and including 500,000 per C. C.	383	17.86+
Samples containing over 500,000 up to and including 1,000,000 per C. C.	110	5.13+
Samples containing over 1,000,000 per C. C.	217	10.12+
<b>Total</b>	<b>2,144</b>	<b>99.99+</b>
Special Examinations	72	
Samples destroyed in transit to laboratory	12	
No counts made	10	
<b>Total</b>	<b>2,238</b>	

The City Milk Ordinance adopted December 2, 1913, and amended August 4, 1914, divides the milk supply into five classes, namely—Certified containing 10,000 bacteria and under per C. C. Grade A., raw, containing 100,000 and under to the C. C. Grade A., pasteurized, containing not more than 300,000 before pasteurization, nor 30,000 after pasteurization. Grade B., pasteurized, containing not more than 1,000,000 before pasteurization nor 50,000 after pasteurization. Grade C., which contains more than 1,000,000 bacteria to the C. C., is sold only in bulk and used only for cooking purposes.



In comparison with the foregoing table it may be seen that 66.88 + % of the samples examined during the year come within requirements of the first three groups, or those generally used for drinking purposes. The remaining 33.12 + % may be divided between the other two divisions and those condemned as falling below standard.

#### ROOM TEMPERATURE COUNTS

Many authorities contend that incubation at 37° C. for two days does not give the total bacteria per C. C. but claim that plates inoculated in the ordinary manner but grown at room temperature for 3 or 4 days, give a more accurate count. Following out this line of thought, in addition to the routine counts just mentioned, room temperature counts have been made throughout the year on 1,992 samples. The results thus obtained are shown in the following table.

ROOM TEMP. BACTERIA EXAMINATIONS	Number of Samples	Per Cent.
Samples containing 50,000 bacteria and under	621	31.17+
Samples containing over 50,000 up to and including 100,000 per C. C.	146	7.32+
Samples containing over 100,000 up to and including 500,000 per C. C.	542	27.75
Samples containing over 500,000 up to and including 1,000,000 per C. C.	188	9.49
Samples containing over 1,000,000 per C. C.	495	25.34
Total	1,992	99.96+

These figures are not required by the Board of Health and are not reported as routine, and the grading of the milk supply is in no way connected with them.

#### EXAMINATIONS FOR STREPTOCOCCI.

During the year, 2,183 examinations have been made to determine the presence of streptococci. Inasmuch as this organism is responsible for outbreaks, in epidemic form, of septic sore throat, the determination of its presence is important in order that cows suffering with mastitis (from which the streptococcus is derived) may be isolated and their milk kept from the general supply.

The following table gives the result of these examinations:

EXAMINATIONS FOR STREPTOCOCCI	Number of Samples	Per Cent
Routine samples examined	2,183	
Streptococci found	8	366+
Special examination for isolation of suspected cows	106	
Streptococci found and cows isolated as result of examination	18	

It will be noted that of the 2,183 samples examined only 8, or .366 + %, contained streptococci. This is an exceptionally low figure and speaks highly of the efficiency of the Corps of Inspectors, as well as the excellent co-operation of the milk dealers in the effort to keep the city milk supply as pure as possible.

#### EXAMINATIONS FOR COLON BACILLI

For a time it was thought possible that by means of a special media (Endo's) the presence of Colon Bacilli in the milk supply might be ascertained. To carry out this idea 260 samples were examined of which 162, or 62.30 + % were found to contain this organism. An attempt was made to determine the number of Colon Bacilli per C. C.

After some experimentation it was found that other organisms, especially certain of the lactic acid group, produced results similar to the Colon Bacilli, and that differentiation by this reason became extremely difficult, if not impossible.

The idea of making counts by this method was therefore abandoned, but the table below, showing the presence or absence of the organism and agreeing with the results obtained in other cities, I believe to be fairly correct:

ROOM TEMPERATURE EXAMINATIONS		Number of Samples	Per Cent.
Number of examinations	.....	260	
Colon bacilli present	.....	162	62.30 +
Colon bacilli absent	.....	98	37.70 +

It is to be remembered that these figures are not intended to show the Colon Bacillus content of the City milk supply. They merely show the number of samples examined in

which the Colon Bacillus was present, and are incorporated in this report merely to show what work was done along this line during the year.

#### EXAMINATIONS FOR ACID-FAST BACILLI.

Toward the close of the year, following out the suggestion of the Health Officer, attempts were made to determine the presence of the acid-fast organisms with the ultimate aim of establishing the presence or absence of Tubercle Bacilli in the milk used for drinking purposes. Owing to the shortness of time before this report was handed in, our figures are inconclusive, and as the investigations will be continued during the ensuing year, it is thought best merely to mention in what part of the samples tested acid-fast organisms were found.

This result is tabulated below:

EXAMINATIONS FOR ACID-FAST BACILLI	Number of Samples	Per Cent
Number of examinations for acid-fast bacilli	40	
Found present	25	62.50
Found absent	15	37.50
Positive acid-fast organisms tested for tubercle bacilli	10	
Found to be tubercle bacilli	0	

I wish to emphasize the fact that this part of the work is not conclusive. In a few cases (10) the work has been finished and the organisms found proved non-tuberculous. In other cases the work could not be finished in time for this report. These results will be given at a later date.



Waiting Room at the C. & D. S.

#### SUMMARY

Route examinations—37° counts	2,144
Room temperature counts	102
Examinations for streptococci	2,883
Special examinations for streptococci	106
Examinations for colon bacilli	260
Examinations for acid-fast organisms	40

Very respectfully submitted,

G. WARD DISBROW, M. D.,

*Third Assistant Bacteriologist*



## THE CITY WATER

The usual bi-weekly series of samples of Pequannock water were obtained throughout the year excepting only such times as severe weather conditions made it inadvisable to take samples from the sampling points on the watershed.

The bacteriological examination consists of making from each sample of the water two sets of plain agar plates; one set is incubated at  $37\frac{1}{2}^{\circ}$  C. and the other grown at room temperature. Two series of fermentation tubes are inoculated with varying amounts of the sample; one set of tubes contains glucose bouillon and the other lactose bile. Thus from each sample of the water 16 inoculations are made, 4 plates and 12 fermenting tubes.

In recording results the room temperature grown agar counts are given and the fermentation is only given when both glucose and lactose bile show the presence of gas producing organisms, giving at least 25% of gas, of which at least 25% is  $\text{CO}_2$ . Sub cultures on Endo's medium are made from the fermenting tubes from time to time for confirmation of the presence of Colon Bacilli.

The results of the tests are given in the following table:

# BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK WATER DURING 1915.

Samples from Oak Ridge Stream, above Clinton Stream

1915	Bact. Per C.C.	Amount of Sample Causing Fermentation in					
		Glucose Bouillon and Lactose Bile					
		1	1	1	1	1	5
		2	10	5	2	C.C.	C.C.
Jan 27	9						
Feb 24	52						
Mar 10	8						+
Mar 14	28						
Apr 14	8	—	—	—	—	+	+
Apr 18	5	—	—	—	+	+	+
May 12	8		—	—	—	—	+
May 2	8		+	+	+	+	+
June 9	70		+	+	+	+	+
June 25	8		+	+	+	+	+
July 15	76				+	+	+
July 28	150		—	—	+	+	+
Aug 11	100			+	+	+	+
Aug 25	60	—	—	+	+	+	+
Sept 9	24	—	+	+	+	+	+
Sept 17	12				+	—	+
Oct 19	950	+	+	+	+	+	+
Oct 28	2500	+	+	+	+	+	+
Nov 1	40	—	—	—	—	—	+
Nov 20	120	—	—	—		—	+
Dec 1	50						

The sign (—) means no fermentation produced.

The sign (+) means fermentation produced.

**BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK  
WATER DURING 1915—Continued**

Samples from Clinton Stream, above Oak Ridge Stream.

1915	Bact. Per C. C.	Amount of Sample Causing Fermentation in Glucose Bouillon and Lactose Bile					
		1	1	1	1	1	5
		20	10	5	2	C. C.	C. C.
Jan 2	35	—		—	—	—	+
Feb 24	170	—		—		—	—
Mar 10	40	—	—	—			—
Mar 24	75						
Apr 11	330	—	—	—	—		+
Apr 28	28	—	—	—	—	+	+
May 12	77	—	—	—	—	+	+
May 27	45	—	—	—	—	—	+
June 9	740					—	—
June 23	1,780		—	+	+	+	+
July 15	1170			—	+	+	+
July 28	200	+	+	+	+	+	+
Aug 11	1,820	—	—	—	+	+	+
Aug 25	1,550	+	+	+	+	+	+
Sept 9	670	—	—	—	+	+	+
Sept 24	680	—	+	+	+	+	+
Oct 19	600	—	—	—	—	+	+
Oct 28	430	—	—	—	—	+	+
Nov 17	130		—	—	—	+	+
Nov 30	80			—	—	—	+
Dec 19	50			—	—	—	—

The sign (—) means no fermentation produced.

The sign (+) means fermentation produced.

# BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK WATER DURING 1915—Continued

Samples from Kanouse Creek above Pequannock River

1915	Bact. Per C.C.	Amount of Sample Causing Fermentation in					
		Glucose Bouillon			and Lacto-Bile		
		1	1	1	2	1	1
		2	1	1	2	1	1
Jan. 26	00						
Feb. 26	0						
Mar. 10	0						
Mar. 21	0						
Apr. 15	0						
Apr. 28	00						
May 12	00						—
May 20	17		+	+	+		+
June 5	17		+	+	+		+
June 19	0		+	+	+	+	+
July 3	700		+	+	+	+	+
July 28	1,000			+	+	+	+
Aug. 11	0			+	+	+	+
Aug. 20	1,800			+	+	+	+
Sept. 3	000			—	+	+	+
Sept. 11	8			+	+	—	+
Oct. 19				—			+
Oct. 28	17						+
Nov. 17	17						+
Nov. 27	0						+
Dec.	00						+

The sign 0 means no fermentation produced

The sign (+) means fermentation produced

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK  
WATER DURING 1915. Continued.

Samples from Echo Lake Stream, above Pequannock River.

1915	Bact. Per C C.	Amount of Sample Causing Fermentation.				
		Glucose Bouillon and Lactose Bile				
		1	1	1	1	5
		2			C C	C C
Jan 14	15					
Feb 14	50					
Mar 1	80					
Mar 24	90					
Apr 14	210					
Apr 28	130					
May 12	980					
May 30	60		+	+		+
June 9	500			—		
June 21	900			—		
July 15	1,000			—	+	
July 28	600			+	+	
Aug 11	370	+	+	+	+	+
Aug 25	2,000			+	+	
Sept 9	1,600				+	+
Sept 21	1,000			+	+	+
Oct 19	200					
Oct 28	1,500					
Nov 11	21					+
Nov 20	321					+
Dec 1	380					

The sign (—) means no fermentation produced

The sign (+) means fermentation produced

BACTERIOLOGICAL EXAMINATION OF PIQUANNOCK  
WATER DURING 1915—Continued

Samples from Macopin Intake, at Gatehouse.

Date	No.	Bact. Per C.C.	Amount of Sample Causing Fermentation in					
			Glucose Bouillon and Lactose Bile					
			1	1	1	1	1	5
			2	1	1	1	1	1
Jan 27	20	20	—	—	—	—	—	+
Feb 2	20	20	—	—	—	—	—	—
Mar 2	20	20	—	—	—	—	—	—
Apr 11	20	20	—	—	—	—	—	—
Apr 28	20	20	—	—	—	—	+	+
May 12	20	20	—	—	—	—	—	+
May 2	20	20	—	—	—	—	+	+
June 1	20	20	—	—	—	—	—	—
June 3	20	20	—	—	—	+	+	+
July 1	20	20	—	—	—	+	+	+
July 28	20	20	—	—	—	—	—	—
Aug 11	20	20	—	—	—	+	+	+
Aug 2	20	20	—	—	+	+	+	+
Sept 1	20	20	—	—	—	—	+	+
Sept 2	20	20	—	—	—	—	+	+
Oct 1	20	20	—	—	+	+	+	+
Oct 28	20	20	—	—	—	—	+	+
Nov 17	20	20	—	—	—	—	—	—
Nov 1	20	20	—	—	—	—	—	+
Dec 1	20	20	—	—	—	—	—	—

The sign (—) means no fermentation produced.

The sign (+) means fermentation produced.

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK  
WATER DURING 1915—Continued.

Samples from Cedar Grove Reservoir, at Inlet Gatehouse.

1915	Bact. Per C. C.	Amount of Sample Causing Fermentation in Glucose Bouillon and Lactose Bile					
		1	1	1	1	1	5
		20	10	5	2	C. C.	C. C.
		—	—	—	—	—	—
Jan. 14	560	—	—	—	—	—	—
Jan. 27	180	—	—	—	—	—	—
Feb. 14	210	—	—	—	—	—	—
Mar. 10	0	—	—	—	—	—	—
Mar. 24	280	—	—	—	—	—	—
Apr. 14	100	—	—	—	—	—	+
Apr. 28	120	—	—	—	—	—	+
May 12	180	—	—	—	—	—	—
May 26	50	—	—	—	—	—	+
June 9	240	—	—	—	—	—	—
June 23	80	—	—	—	+	+	+
July 15	160	—	—	—	—	+	+
July 28	220	—	—	—	—	—	+
Aug. 11	260	—	—	—	+	+	+
Aug. 25	140	—	—	—	—	+	+
Sept. 9	200	—	—	—	—	—	+
Sept. 24	270	—	—	—	—	—	+
Oct. 19	190	—	—	—	—	—	—
Oct. 28	230	—	—	—	—	—	+
Nov. 17	60	—	—	—	—	—	+
Nov. 30	70	—	—	—	—	—	—
Dec. 10	90	—	—	—	—	—	—

The sign (—) means no fermentation produced

The sign (+) means fermentation produced

**BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK  
WATER DURING 1915- Continued**

Samples from Cedar Grove Reservoir, at Outlet Gatehouse

1915	Bact Per C C	Amount of Sample Causing Fermentation in				
		Glucose Bouillon and Lactose Bile				
		1	1	1	5	5
		1	1	2	C C	C C
June 10	5					
June 17	12					
July 1	2					
Aug 10	25					
Sept 21	5					
Apr 11	1					
Apr 28	5	—			—	+
May 1	5					
May 6	18	—			—	
June 9	10	—			—	—
June 17	8		—	—	+	+
June 17	9		—		—	+
June 18	25	—	—		—	+
Aug 11	5		+	+	+	+
Aug 22	5		—		—	+
Sept 5	18	—	—	—	—	—
Sept 23	10	—	—	—	+	+
Oct 1	10		—	—		+
Oct 28	10					—
Nov 12	85				—	
Nov 30	110	—	—	—	—	—
Dec 10	34	—	—	—		

The sign (—) means no fermentation produced

The sign (+) means fermentation produced



# BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK WATER DURING 1915. Continued

Samples from Belleville Reservoir, at Inlet Gatenouse

1915	Bact. Per C.C.	Amount of Sample Causing Ferment- ation in				
		Glucose Bouillon and Lactose Bile				
		1	1	1	5	10
April 1	10					
June 22	6					
Feb 23	2					
May 10	8					
May 21	25					
May 11	160		1	—		
Apr 28	165					
May 12	80					—
May 26	11					+
June 5	120					—
June 27	100					+
July 1	80					+
July 28	10					—
Aug 11	8		+	—	—	+
Aug 27	8		+			+
Sept 9	50					—
Sept 24	120					+
Oct 10	50					—
Oct 28	110					—
Nov 17	6					
Nov 27	170					+
Dec 1	18					

The sign (—) means no fermentation produced

The sign (+) means fermentation produced

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK  
WATER DURING 1915—Continued.

Samples from Belleville Reservoir, at Outlet Gatehouse.

1915	Bact Per C C	Amount of Sample Causing Fermentation in Glucose Bouillon and Lactose Bile					
		1	1	1	1	1	5
		2	10	50	2	100	100
		2	10	50	2	100	100
Jan. 4	20	—	—	—	—	—	—
Jan. 27	50	—	—	—	—	—	—
Feb. 26	180	—	—	—	—	—	—
Mar. 1	8	—	—	—	—	—	—
Mar. 24	100	—	—	—	—	—	—
Apr. 16	280	—	—	—	—	—	—
Apr. 28	80	—	—	—	—	—	—
May 12	80	—	—	—	—	—	—
May 20	110	—	—	—	—	+	+
June 9	190	—	—	—	—	—	—
June 23	2	—	—	—	—	—	+
June 15	250	—	—	—	—	—	—
July 28	100	—	—	—	—	—	+
Aug. 1	110	—	—	+	+	—	+
Aug. 5	6	—	—	—	—	+	+
Sept. 9	0	—	—	—	—	—	—
Sept. 20	10	—	—	—	—	—	+
Oct. 9	0	—	—	—	—	—	+
Oct. 28	0	—	—	—	—	—	—
Nov. 17	110	—	—	—	—	—	—
Nov. 30	60	—	—	—	—	—	—
Dec. 1	28	—	—	—	—	—	—

The sign (—) means no fermentation produced.

The sign (+) means fermentation produced.

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK  
WATER DURING 1915—Continued.

Samples from Board of Health Office, Plaza and William Sts.

1915	Baet. Per C C.	Amount of Sample Causing Fermentat.on in Glucose Bouillon and Lactose Bile					
		1	1	1	1	1	1
		20	10	5	2	C C	C C
Jan. 11	170						
Jan. 27	60						
Feb. 24	80						
Mar. 24	110						+
Mar. 19	60		—				—
Apr. 14	110		—				—
Apr. 28	70		—				—
May 12	40		—				—
May 26	140						—
June 9	50						—
June 23	40						+
July 15	50						
July 28	60						
Aug. 11	80					+	+
Aug. 25	45						+
Sept. 9	40						—
Sept. 24	22						+
Oct. 19	3						+
Oct. 28	5						+
Nov. 30	5						+
Nov. 17	3						+
Dec. 10	6						+

The sign (—) means no fermentat.on produced.

The sign (+) means fermentation produced.

BACTERIOLOGICAL EXAMINATION OF PEQUANNOCK  
WATER DURING 1915—Continued

Samples from Laboratory Faucet, City Hospital

1915	Bact Per C C	Amount of Sample Causing Fermentation in					
		Glucose Bouillon and Lactose Bile					
		1	1	1	1	1	1
		20	1	1	2	1	1
Jan 11	+						
" 27	+						
Feb 1	+						
Mar 1	0						
Mar 23	+						
Apr 11	+						
Apr 2	+						+
Apr 28	+						
May							
May 12	+						+
May 22	0				+		
May 26	1 0						
June 1							
June 11	1 80				+		
July 15	+						
July 28	+						
Aug 11	8						
Aug 27	8						+
Sept 3	8						
Sept 11							
Sept 21							
Oct 19	+						
Oct 28							
Nov 17							
Nov	8						
Dec 1	+						

The sign ( - ) means no fermentation produced

The sign ( + ) means fermentation produced

AVERAGE NUMBER OF BACTERIA PER CUBIC CENTIMETER IN THE PEQUANNOCK WATER AT  
THE SAMPLING POINTS FOR SIX YEARS.

ORIGIN OF SAMPLES	1910		1911		1912		1913		1914		1915	
	Number of Samples	Average of Bacteria Per C.C.	Number of Samples	Average of Bacteria Per C.C.	Number of Samples	Average of Bacteria Per C.C.	Number of Samples	Average of Bacteria Per C.C.	Number of Samples	Average of Bacteria Per C.C.	Number of Samples	Average of Bacteria Per C.C.
Oak Ridge Stream, above Clinton Stream	22	1,611	21	1,452	22	1,879	23	1,111	19	1,441	21	852
Clinton Stream, above Oak Ridge Stream	22	1,475	21	1,370	22	773	23	877	19	1,329	21	750
Kanouse Creek, above Pequannock River	22	1,761	21	1,636	22	1,261	23	1,428	19	1,139	21	643
Echo Lake Stream, above Pequannock River	22	2,236	21	1,117	22	1,016	23	746	19	1,411	21	193
Macopin Intake, at Gatehouse	22	690	21	1,352	22	655	23	733	19	570	21	511
Cedar Grove Reservoir, at Inlet Gatehouse	23	364	22	110	11	43	23	292	20	236	22	135
Cedar Grove Reservoir, at Outlet Gatehouse	21	260	22	238	2	287	23	208	19	215	22	158
Belleville Reservoir, at Outlet Gatehouse	26	190	22	235	29	275	23	192	22	264	22	136
Cedar Grove Reservoir, at Inlet Gatehouse	25	216	22	214	29	267	23	172	22	264	22	178
Board of Health Office, Plane and William Sts.	27	99	22	172	32	188	25	99	25	12	22	66
Laboratory Faucet, City Hospital	28	106	22	118	67	152	30	95	41	110	26	99

Respectfully Submitted,

RICHARD N. CONNOLLY, M. D.,

*Bacteriologist.*



REPORT OF THE  
SEROLOGICAL LABORATORY  
AT THE  
CITY HOSPITAL





# Serological Laboratory

## AT THE CITY HOSPITAL

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*Charles V. Craster, M. D., D. P. H., Health Officer:*

I herewith submit the report of the Serological Laboratory for the year 1915:

### ORGANIZATION.

In May, 1913, the Board of Health decided to combine the facilities of the Bacteriological and Pathological Laboratories at the City Hospital in order to perform the Wassermann Reaction for the Serological Diagnosis of Syphilis.

The Serological Laboratory was organized to perform the Wassermann Reaction and to examine free of charge for the *Treponema Pallidum* (germ of syphilis) from patients residing in the City of Newark.

The tests are made once a week at the laboratory. Physicians may collect the blood specimens personally, using the outfit supplied by the Department, or they may send the patients direct to the laboratory for this purpose. Outfits for samples of blood required in the tests, with a history blank containing directions can be obtained at any of the culture stations established by the Board of Health or at the laboratory.

## RECORD OF WASSERMANN TESTS

The laboratory has at the present time compiled over 6,000 reports of Wassermann tests, about one-third of this number being from the medical and surgical wards of the City Hospital. These reports are filed, bound in volumes and card indexed.

## ROUTINE WASSERMANN TESTS FOR HOSPITAL PATIENTS.

In my report for the year 1914, attention was called to the fact that it was fast becoming a diagnostic necessity in the City Hospital to have routine Wassermann reactions carried out on patients staying in the institution for a longer period than one week. This will greatly increase the work, and necessitate the performance of the tests on three or more days a week, instead of once a week as is being done at the present time. Furthermore the Wassermann reaction is intimately connected with clinical pathology in general and with other special serological procedures, such as for chronic organic lesions of the central nervous system, requiring for their proper diagnosis a complete examination of the spinal fluid as to globulin content, pleocytosis, complement fixation and colloidal gold tests (a procedure just as important as the examination of the urine in a diabetic case) that the work becomes a very important part of the pathological work for patients in the City Hospital. It therefore should always be a part of the duties of the pathological laboratory of the City Hospital, and at the same time it is earnestly hoped that in the future organization of the laboratories with the increased equipment, the tedious and monotonous part of the technique can be done by trained technicians.

## FUTURE ACTIVITIES.

With the erection of the new laboratory building it is hoped that the work may be increased by the performance of complement fixation tests for the diagnosis of gonorrhoea, tuberculosis, pertussis, glanders and certain streptococcal infections, and that there will be a stimulus for the study of certain problems in infection and immunity.

## REPORT FOR YEAR 1915.

The following table will show approximately the work done by the laboratory during the year 1915:

## WASSERMANN TESTS FOR THE YEAR 1915

TABLE No. 1

MONTH	Number of			City		
	Wassermann Reactions	Positive	Negative	Hospital	Dispensary	Other Sources
January	209	6	140	64	25	119
February	242	64	178	65	22	155
March	356	82	274	109	28	219
April	369	67	302	81	17	271
May	350	64	286	131	31	188
June	321	66	255	136	21	164
July	263	31	232	69	13	181
August	261	39	222	76	16	169
September	318	63	255	74	27	217
October	268	66	202	69	18	181
November	344	105	239	107	32	205
December	387	92	295	138	39	210
Totals	3 688	808	2 880	1 200	281	2 207

TABLE No. 2

Total number of Wassermann reactions since laboratory started:

1913 - 8 months only.	1,061
1914	2,322
1915	3,688

Total for 3 years..... 7,071

#### WORK DONE FOR HOSPITALS AND PHYSICIANS

During the year 1915, 307 physicians in Newark have sent blood specimens or patients to the laboratory for examination.

The following institutions have used the laboratory for the performance of the Wassermann reaction: City Hospital, City Dispensary, St. Michael's Hospital, St. James' Hospital, St. Barnabas' Hospital, German Hospital, Newark Eye and Ear Infirmary, Beth Israel Hospital, Homeopathic Hospital, Home for Crippled Children, Women's and Children's Hospital, Babies' Hospital, Soho Isolation Hospital, Florence Crittenden Home, and Departments of Education and Child Hygiene.

#### EARLY DIAGNOSIS OF SYPHILIS IMPORTANT

Numerous examinations for *treponema pallidum* have been made from initial lesions, positive early diagnosis often made, and the patient started under proper and early treatment. This is of great importance, as vigorous treatment started before the stage of generalization is practically the only chance a syphilitic has of being cured of the disease. By judicious argument many cases of active syphilis, especially in young adults, have been directed to physicians and institutions where they can receive proper treatment and be kept from mixing in society until they have passed their active communicable stage of syphilis.

H. S. MARTLAND, M. D.

ANNUAL  
**REPORT OF THE CHEMIST**  
NEWARK BOARD OF HEALTH



# ANNUAL REPORT OF THE CHEMIST

*Dr. Chas. V. Craster, Health Officer, Newark, N. J..*

DEAR SIR —I herewith submit my annual report for the year ending December 31, 1915

The milk work continues to be of prime importance, but the classified tables of analyses which for the past eighteen years have featured in my annual reports have been discontinued, as the increasing number of samples makes them too voluminous. The retention of tables of analyses of city water seems desirable, however, as inquiries for these are continually received from both citizens and non-residents.

A condensed summary of the analytical work and the tables of city water examinations follow:

## MILK

Sealed samples analyzed.....	810
Unsealed samples analyzed....	569
Sediment tests made .....	183
Samples below State standard of 11.50% total solids .....	129
Average composition of—	TOTAL SOLIDS. FAT.
Samples above standard. ....	12.43% 3.62%
Samples below standard.....	10.94% 2.85%
All samples ..	12.29% 3.55%

Although the general average quality of the milk is indicated by the figures to be slightly less than last year, it is in reality improved, as the much larger proportion of

milk below standard this year are included in the averages. This greater proportion of below standard samples was probably due to a more thorough knowledge of conditions by the inspectors and more careful selection of samples. It has also resulted in a much larger collection of penalties.

The milk sold in Newark is now graded according to the requirements of the new Milk Ordinance. This system is being largely adopted throughout the country, and while it is realized that the best way would be to have all milk of the highest grade, conditions will not admit of such a radical change for the entire milk supply at once and it is hoped that the grades are only a means towards an end.

The increasing knowledge and more general use of the homogenizer in the milk industry may bring us in contact with a new form of sophistication, although the apparatus is very expensive and would not be likely to be used by small dealers. The machine is one through which the milk or cream or other mixture is forced under very high pressure (about 3,000 lbs. per sq. in.) in such a way as to break up the butter or fat globules into particles much smaller than normal size. The practical effect of this is to make perfect emulsions which will not separate and, in the case of cream, make a 20% cream look more like a 30% article. The process has many legitimate uses in the ice cream and condensed milk factories, but it is also capable of serious abuses.

The diameter of most of the normal fat globules in milk is between .0003 and .00015 of an inch and that of the homogenized globules between .0001 and .00004 of an inch, but the latter sizes vary with the degree of homogenization. The photographs show the difference in appearance under the microscope.





Taking Sample of City Water at Kanouse Creek. Newark Water Sheds

#### WATER

Samples of city water analyzed... 108

There is little comment necessary on the quality of the city water. Apart from occasional moderate variations in one or more constituents in the samples from different parts of the Watershed, the chemical composition of the water is quite uniform. The only variations of note in the laboratory samples occur when the supply is changed from Oak Ridge to Clinton Reservoir and vice versa, the Clinton water having less total mineral matter than that from Oak Ridge

#### MISCELLANEOUS

Analyses of soda water and syrup....	38
Saccharin found in these samples....	18
Butter (3 were oleomargarine)....	6
Well water .....	7

Other miscellaneous samples included canned goods, olive oil, candy, meat, flour, bread, salad, etc.

The enactment and enforcement during the year of the law regulating the manufacture of "soft drinks" has had the effect of improving sanitary conditions at the factories where these beverages are made and the general discontinuance of the use of saccharin as a sweetening agent.

Several investigations of special interest were encountered during the year. One of these was that of a so-called "A B C" flour used by a prominent baking concern in their bread dough. It was charged that plaster of paris was being used to adulterate the bread. Investigation showed that the concern was using a very small amount of sulphate of lime. This they had found by a long, expensive research to be an excellent food for the yeast plant, but so small an amount is used that it is difficult of detection in the bread by chemical means and is not believed to have any harmful significance. On the other hand, it so stimulates the yeast growth that not only less has to be used, but a better product is the result.

Some potato salad covered with deep red blotches was suspected of being poisoned. It looked as though it might have been daubed with red ink, but examination showed that the color was due to a luxuriant growth of prodigious, a highly colored but not pathogenic variety of bacteria.

A number of loaves of bread, baked at the baker's from dough mixed at home, caused serious illness in a dozen or more persons who ate it. That the bread was really at fault was confirmed by an experimental portion eaten by the writer and afterwards by the discovery on analysis of the presence of a considerable quantity of arsenic in the remaining loaves. The source of the poison was never ascertained.

The Municipal Chemical Laboratory, recommended in my report of last year, is still needed, although the present is a most inopportune time to equip one on account of the very advanced price of most of the apparatus and the impossibility of getting some of it at all. The present laboratory facilities, however, are being extended sufficiently to largely increase the milk and other work.

Very respectfully,

HERBERT B. BALDWIN,

*Chemist*

ANALYSES OF NEWARK CITY WATER  
Averages of Monthly Examinations 1915  
PARTS PER MILLION

SOURCE OF SAMPLES	Tetra- ammonia				NITROGENS				Chlorine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
	Parts per million	Parts per million	Parts per million	Parts per million	Nitrite		Nitrate						
					Parts per million	Parts per million	Parts per million	Parts per million					
Oak Ridge Stream	81	0.7	27.1	158	0.12	*	11.8	2.3	25.83	54.83	21.16	33.66	
Clinton Stream	11	0.7	21.8	62.8	8.1	*	6.11	2.55	15.11	11.18	1.75	26.13	
Kinnouse Brook	17.8	0.54	17.0	10.7	2.85	0	98.6	2.1	18.78	18.08	19.81	28.25	
Echo Lake Stream	18.9	0.54	12.1	0.298	19.7	0	101.5	2.25	20.78	54.83	25.56	32.33	
Macopin Intake	115	0.51	5.0	0.173	1.70	0	17.70	2.25	19.92	50.11	20.17	30.00	
Cedar Grove Intake	53.9	0.7	8.8	0.142	09.8	0	98.04	2.1	19.31	50.42	21.08	29.34	
Cedar Grove Outlet	53.5	0.7	28.8	0.118	09.48	0	82.5	2.11	19.59	51.67	20.00	31.67	
Belleville Reservoir	52.1	0.7	28.8	0.172	09.14	0	82.1	2.21	20.83	49.67	21.50	28.17	
Laboratory Faucet	53.8	0.7	28.8	0.147	09.12	0	82.1	2.1	20.42	51.33	21.33	30.00	

\* Trace

**ANALYSES OF NEWARK CITY WATER**  
 Samples from Oak Ridge Stream before reaction with Canton Stream at New Foundland  
**PARTS PER MILLION.**

1905	Tempera- ture, F ar	Tur- bidity	Color	NITROGEN AS				Chlo- rine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
				Free Ammonia	Albuminoid Ammonia	N trites	N trates					
Jan 2.	36	0.5	15	.022	.088	0	.20	1.0	24	52	17	34
Feb. 18.	37	0.5	40	.016	.092	0	.13	2.0	15	46	25	21
Mar 24	37	0.5	25	.018	.084	0	.10	2	23	41	15	26
Apr. 14....	43	0.5	30	.012	.094	0	.11	2.5	19	62	15	47
May 26	58	0.5	30	.020	.118	0	.065	2.0	21	50	24	26
June 9	54.5	0.5	20	.008	.102	0	.09	2.0	27	56	20	36
July 14	61	0.5	30	.011	.131		.05	2.0	25	36	25	11
Aug 11....	61	0.5	20	.008	.078	*	.165	2.5	28	48	19	29
Sept. 9	65	0.5	40	.028	.120	0	.10	2.0	31	69	25	44
Oct. 19 .....	53	0.5	30	.012	.136	0	.05	2.0	29	63	24	39
Nov. 17 .....	40	0.5	30	.020	.114	0	.10	3.0	31	61	21	40
Dec 10	32	0.5	15	.012	.078	0	.12	3.0	37	60	10	50

\* Trace

**ANALYSES OF NEWARK CITY WATER**  
**Samples from Clinton Stream, before junction with Oak Ridge Stream at New Foundland.**  
**PARTS PER MILLION**

Date	Temperature Fahrenheit	Total Solids	Loss on Ignition	Fixed Solids	ANALYSES					Temporary Hardness	Total Solids	Loss on Ignition	Fixed Solids
					Gravimetric	Calcium	Sulfur	Silica	Iron				
Jan 27	53	0.9	9	8	0.88	0	0	0	0	5	51	12	39
Feb 18	57	0	5	0	0.88	0	0	0	0	10	43	19	24
Mar 14	67	1	15	16	0.84	0	0	0	0	15	31	16	15
Apr 11	71	5	2	20	3	0	0	0	0	8	55	16	39
May 20	76	5	20	14	0	0	0	0	0	9	45	23	22
June 9	72	2	10	18	0.84	0	0	0	0	11	46	15	31
July 11	Sample broken out at 4												
Aug 11	68	0.5	20	008	0.78					12	38	16	22
Sept 9	78	0.5	20	0.22	0.92					12	40	17	23
Oct 19	54	0.5	1	0.12	0.71	0	0	0	0	12	55	17	38
Nov 1	50	5	15	0	0.7	0	0	0	0	24	47	21	26
Dec 1	50	0	30	.080	1.04	0	0	0	0	11	35	21	14

\* Trace

ANALYSES OF NEWARK CITY WATER  
 Samples from Kanouse Brook, above Pequannock River  
 PARTS PER MILLION

Date	Tempera-	TUR- BIDITY	Gr.	NITROGEN AS					Chlo- rine	Temporary	Total Solids	Loss on Ignition	Fluor- ides
	ture			Fe	Al	Ca	N	N		Hardness			
	Fahr.			Alum.	Alum.	Alum.	Parts	Parts		P.p.m.			
Jan 7	33	0.5	40	.022	.094	0	.075	2.0	14	31	15	16	
Feb 18	39	0.5	40	.018	.086	0	.05	2.0	13	37	16	21	
Mar 21	36	0.5	30	.034	.100	0	.075	2.0	19	34	14	26	
Apr 14	42	0.5	40	.018	.082	0	.075	1.5	11	27	19	18	
May 26	55	0.5	70	.022	.128	0	.075	1.5	17	45	22	23	
June 9	51.5	0.5	26	.012	.092	0	.06	2.0	23	66	21	45	
July 11	61	0.5	35	.014	.132	0	.09	2.0	25	69	25	41	
Aug 11	63	1.0	120	.016	.168	0	.15	2.0	15	48	26	19	
Sept 9	64	0.5	50	.015	.164	0	.10	2.0	27	57	22	35	
Oct 19	54	0.5	50	.014	.124	0	.08	2.5	23	56	23	33	
Nov 17	38	0.5	40	.016	.080	0	.08	3.0	18	40	11	29	
Dec 10	33	0.5	30	.012	.052	0	.125	3.0	18	57	24	19	

ANALYSES OF NEWARK CITY WATER  
 Samples from Echo Lake Stream, above Pequannock River  
 PARTS PER MILLION

1915	Tempera- ture, Fahrenheit	Turbidity	Color	NITROGEN AS				Chlorine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
				Free Ammonia	Albuminoid Ammonia	Ni- trates	Ni- trates					
Jan 27	36	0.5	10	0.38	1.68	0	0.75	2.0	19	54	27	27
Feb 18	7	0.5	10	0.22	1.52	0	.05	2.0	16	51	22	29
Mar 24	36	0.5	15	0.18	0.94	0	10	2.0	23	48	19	29
Apr 14	42	7	10	0.9	1.8	0	10	2.0	15	50	18	32
May 26	55	0.5	100	0.18	1.2	0	10	1.5	16	50	29	21
June 9	52	0.5	25	0.14	0.98	0	.13	3.0	20	55	14	41
July 14	65	0.5	7	0.22	1.8	0	.15	2.0	21	67	32	35
Aug 11	62	1.0	6	0.08	1.8	0	.15	2.0	18	53	25	28
Sept 9	62	0.5	20	0.12	1.10	0	10	2.0	26	68	33	35
Oct 19	55	0.5	6	0.8	1.50	0	.08	2.5	28	73	41	32
Nov 17	57	0.5	20	0.14	.78	0	.08	3.0	21	70	23	47
Dec 10	32	0.5	10	.28	1.64	0	10	3.0	23	55	23	32



ANALYSES OF NEWARK CITY WATER  
 Samples from Macopin Intake, at Gatehouse  
 PARTS PER MILLION.

	Tempera- ture	Tur- bidity	Color	NITROGEN AS				Chlo- rine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
				Free	Ammoniacal	N <sub>2</sub>	Ni- trate					
Jan. 27	34	0.5	30	.020	.098	0	.085	3.0	17	57	15	42
Feb. 18	36	0.5	35	.018	.092	0	.05	2.0	15	37	13	24
Mar. 24	40	0.5	25	.022	.076	0	.10	2.0	21	37	16	21
Apr. 14	43	0.5	35	.016	.090	0	.075	2.0	14	43	15	28
May 26	55	0.5	35	.028	.130	0	.075	2.0	17	49	24	25
June 9	58	0.5	20	.018	.094	0	.07	2.5	17	43	19	24
July 14	62	0.5	15	.019	.08	0	.08	2.0	25	61	17	44
Aug. 11	68	1.0	10	.012	.048	0	.08	2	17	51	25	26
Sept. 20	70	0.5	15	.012	.06	0	.04	2.0	22	64	27	37
Oct. 9	57	0.5	15	.024	.138	0	.04	2.0	31	52	19	33
Nov. 7	60	0.5	15	.014	.068	0	.08	1.0	28	68	28	40
Dec. 1	52	0.5	10	.014	.064	0	.04	2.0	15	40	24	16

ANALYSES OF NEWARK CITY WATER.  
Samples from Cedar Grove Reservoir, at Inlet Gatehouse  
PARTS PER MILLION.

1915	Date	Temperature	Specific Gravity	Color	pH	Alkalinity			Hardness	Total Solids	Loss on Ignition	Fixed Solids
						Carbonate	Chloride	Sulfate				
Jan	27	51	1.007	15	8.2	.098	0	.075	2.0	47	26	21
Feb	18	42	1.005	15	8.8	.081	0	.065	2.0	35	15	20
Mar	4	42	1.005	15	9.1	.081	0	.075	2.0	42	20	22
Apr	11	46	1.005	15	10	.084	0	.11	2.0	68	27	41
May	26	58	1.007	20	9	.090	0	.075	2.0	42	16	26
June	9	61	1.007	20	9	.09	0	.07	2.5	47	22	25
July	13	75	1.007	20	9.1	.072	0	.075	3.0	52	24	28
Aug	11	73	1.005	6	9.06	.108	0	.125	2.0	41	1	20
Sept	1	72	1.005	5	9.12	.082	0	.13	2.0	40	1	20
Oct	13	66	1.005	5	11	.11	0	.12	3.0	60	14	36
Nov	1	51	1.005	5	11	.094	0	.08	2.0	52	1	31
Dec	10	45	1.005	15	10.4	.098	0	.09	2.0	50	1	38

ANALYSES OF NEWARK CITY WATER  
 Samples from Cedar Grove Reservoir, at Outlet Gatehouse  
 PARTS PER MILLION.

1915	Tempera- ture, Fahr.	Tur- bidity	Color	NITROGEN AS				Chlo- rine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
				Free Ammonia	Abundant Ammonia	Ni trates	Ni- trates					
Jan 27	35	0.5	40	.034	.092	0	.15	2.0	20	55	21	31
Feb 18	4	0.5	45	.022	.090	0	.05	2.0	16	47	17	30
Mar 24	40	0.5	25	.014	.074	0	.075	2.0	21	45	18	27
Apr 14	47	0.5	25	.014	.084	0	.100	2.0	14	55	15	40
May 26	59	0.5	20	.020	.090	0	.075	2.0	14	43	19	24
June 9	75	0.5	20	.016	.152	0	.06	2.0	19	47	18	29
July 11	71	0.5	20	.010	.088	0	.07	3.0	19	51	20	31
Aug 11	70	0.5	30	.006	.088	0	.10	2.0	23	49	24	25
Sept 1	60	0.5	35	.012	.082	0	.09	2.0	21	53	26	27
Oct 10	58	0.5	35	.012	.118	0	.05	2.5	28	69	26	43
Nov 17	4	0.5	35	.012	.090	0	.08	2.0	25	59	25	34
Dec 9	34	0.5	35	.006	.090	0	.09	2.0	15	47	11	36

ANALYSES OF NEWARK CITY WATER  
 Samples from Belleville Reservoir, at Inlet Gatehouse.  
 PARTS PER MILLION

1916	Tempera- ture, Fahr	Tur- bidity	Color	NITROGEN AS				Chlo- rine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
				Free Ammonia	Ammonia Acid	Ni- trates	Ni- trates					
Jan. 2	35	0	20	.18	.094	0	.10	2.0	21	47	24	23
Feb. 8	38	0	20	.022	.090	0	.07	2.0	15	42	19	23
Mar. 24	49	0	25	.11	.074	0	.075	2.0	20	31	11	20
Apr. 16	48	0	25	.20	.090	0	.10	2.0	14	51	22	29
May 20	50	0	30	.24	.104	0	.075	2.0	14	50	21	29
June 9	65	0.1	25	.018	.090	0	.08	2.5	17	42	23	19
July 14	67	0.5	20	.018	.080	0	.075	2.0	26	62	25	37
Aug. 11	72	0.5	30	.006	.082	0	.10	2.0	23	50	21	29
Sept. 9	72	0.5	35	.012	.088	0	.08	2.0	21	54	24	30
Oct. 19	60	0.5	35	.010	.106	0	.05	2.5	29	57	27	30
Nov. 17	42	0.5	30	.014	.094	0	.08	2.5	28	57	25	32
Dec. 10	37	0.7	30	.006	.090	0	.10	2.0	22	53	16	37

ANALYSES OF NEWARK CITY WATER  
Samples from Laboratory Faucet, 927 Broad Street  
PARTS PER MILLION

Date	Temperature, Fahr	Turbidity	Color	NITROGEN AS				Chlorine	Temporary Hardness (Alkalinity)	Total Solids	Loss on Ignition	Fixed Solids
				Free	Albuminoid	Ni-	Ni					
				Ammonia	Ammonia	trites	trates					
Jan. 1	37	0.5	30	.018	.094	0	.10	2.0	21	52	18	34
Feb. 1	40	0.5	30	.022	.088	0	.07	2.0	15	50	14	36
Mar. 1	41	0.5	25	.016	.068	0	.075	2.0	20	33	13	20
Apr. 1	48	0.5	25	.020	.092	0	.10	2.0	14	53	29	24
May 26	59	0.5	35	.022	.110	0	.075	2.0	16	49	21	28
Jun. 1	62	0.5	20	.018	.092	0	.08	2.0	18	49	21	28
July 1	67	0.5	20	.012	.088	0	.075	2.0	19	48	23	25
Aug. 1	72	0.5	30	.006	.086	0	.10	2.0	23	53	21	32
Sept. 1	68	0.5	35	.012	.088	0	.08	2.0	21	50	26	24
Oct. 1	60	0.5	35	.010	.140	0	.05	2.5	28	67	21	46
Nov. 1	47	0.5	30	.014	.092	0	.08	2.5	28	62	26	36
Dec. 1	41	0.5	30	.018	.092	0	.10	2.0	22	50	23	27



ANNUAL REPORT  
OF THE  
**BUREAU OF TUBERCULOSIS**





# ANNUAL REPORT

## OF THE

# BUREAU OF TUBERCULOSIS

January 1st, 1916.

*Charles V. Craster, M. D., D. P. H., Health Officer*

DEAR SIR:—Herewith I present the report of the Bureau of Tuberculosis for the five and one half months of its existence. The sanatorium report will be given in two periods. The first will cover the six and one-half months of the year, prior to its coming under the supervision of the Bureau, and will be as complete a record as possible from the data available. The second period will cover the five and one-half months since the Bureau was established, July 16th, 1915. The report will also be made in two divisions, medical and financial.

### SANATORIUM AT VERONA.

#### MEDICAL REPORT FROM JANUARY 1 TO JULY 15, 1915

Patients in Sanatorium January 1, 1915 . . . . .	55
Patients admitted from January 1 to July 15, 1915 . . . . .	87
	142
Patients discharged from January 1 to July 15, 1915 . . . . .	89
Patients died in same period . . . . .	2
	91
Patients in Sanatorium July 15, 1915 . . . . .	51

No record of the classification on admission of the 142 patients could be found.

## RECORD OF CONDITION ON DISCHARGE

This showed that 6 patients stayed too short a time to warrant classifying as to condition. Only those whose stay was a month or more were included. These numbered 83 and on the record were classified as follows:

Quiescent .....	41
Improved .. ..	26
Unimproved ....	16

## DEFINITION OF TERMS.

I judge from the terms used, that these patients were classified according to the schema of the National Association for the Study and Prevention of Tuberculosis, and it will be necessary to give the definition of these terms to properly show the results of sanatorial care and treatment during this six and one-half months. This schema gives the following definitions.

Quiescent: "Absence of all constitutional symptoms; physical signs stationary or retrogressed; the foregoing condition to have existed for 2 months, expectoration with bacilli may or may not be present."

Improved: "Constitutional symptoms decreased or absent; physical signs improved or unchanged; cough and expectoration with bacilli usually present."

Unimproved: "All constitutional symptoms and physical signs unabated or increased."

The average stay of these 83 patients was  $4\frac{1}{4}$  months. The longest individual stay was 14 months, 9 days; the shortest, 1 month, 1 day. Naturally those who had been longest in the sanatorium were the ones classified as quiescent.

RECORD OF THE 51 CASES INHERITED BY THE  
BUREAU JULY 16, 1915.

When the Bureau took over the supervision of the sanatorium, the census showed 51 patients, who, by examination, were classified as follows.

Quiescent	22
Improved	5
Unimproved	11

Of the unimproved, 3 were in such condition that they were either sent home or to a hospital, all have since died.

Of the quiescent cases, 18 had expectoration with bacilli; 4 had had negative sputum 2 months, but had marked pulmonary lesions. All of the improved and unimproved had positive sputum.

## SCIENTIFIC TREATMENT INSTITUTED

The subsequent history of the remaining 48 patients is interesting. So as to obviate any wrong impression that may be held concerning the use of tuberculin at the sanatorium, it might be well to state here, that before treatment the permission of the patient is always obtained.

There has been more or less antagonism to tuberculin treatment which may be said to be due to two causes. The first is, that failures and bad results have come from its use, resulting from the mistaken idea that it is a cure all. The second is that those physicians meeting with failure, often, and those meeting with bad results, nearly always, rush into print, giving a history of failure or bad results, making denial of any value as a remedy and warning

against its use. True to human nature, which is prone to criticise, many readers of such denunciatory articles have accepted such views with the result that today the most strenuous decriers of the use of tuberculin are those who have never used it. It is fortunate, however, that in the medical profession there have always been some who, before making statements or accepting hasty conclusions, have questioned the reason for failure to achieve good result, be it of new remedy or operation, in order to determine whether the result is due to lack of complete knowledge of the subject or absence of finished technic. The searcher and investigator have a basis for recommendation or condemnation, which the jumper at conclusions can never have. As Kolmer, of the University of Pennsylvania, has said in his recently published book on Infection, Immunity and Specific Therapy, speaking of tuberculin: "Accepting as evidence only the statements of those who have used tuberculin and not of those who believe it to be dangerous and have never used it, one deduction is justified; that while tuberculin is not a specific 'cure' for tuberculosis any more than hygiene, diet and climate are cures--it helps to arrest the disease and is in general a useful factor in the treatment of certain types of the disease."

*Reasons for the Use of Tuberculin.* Tuberculin has been used at the sanatorium knowingly, after experience through many years. Many case histories in the past have shown failures and some bad results, but the writer has always had faith that the method, not tuberculin, was at fault. It is used at this time scientifically with a definite purpose in view, not as a cure, but as a means of overcoming toxicity, and for augmenting the patient's ability to manufacture anti bodies. The fact should not be lost sight of in such treatment that the tuberculous person is markedly sensitive to tuberculin, and that the reaction

point should always be slowly and carefully approached. When this point is reached, there should be only the slightest possible degree of reaction, whether constitutional, local or focal. Reaction on tuberculin alone, regardless of an abundance of rest, or sunshine or good food will bring disappointments and regrets. With this exposition of the treatment policy, I am ready to give an account of the 48 patients remaining in the sanatorium July 20th. Four are still in the sanatorium, making 44 who have been discharged.

*Record of Condition on Discharge after the Scientific Use of Tuberculin*

Arrested .. .. .	4
Apparently arrested .. . . .	12
Quiescent (sputum negative).....	22
Improved (sputum negative). . . . .	6

Compare this with the record of the first six months:

Quiescent .. .. .	41
Improved .. .. .	26
Unimproved .. .. .	16

*Definition of Terms.*—The National Association defines arrested and apparently arrested as follows: Arrested: "All constitutional symptoms and expectoration with bacilli absent for a period of 6 months; physical signs to be those of a healed lesion." Apparently arrested: "All constitutional symptoms and expectoration absent for a period of 3 months; physical signs to be those of a healed lesion."

The 4 arrested cases were the 4 quiescent cases with negative sputum. Two of them are attendants at the clinic, and now have a record of 8 months with negative sputum, both are in fine physical condition with the prospect of reaching the National Association's apparently cured class, namely: "All constitutional symptoms and expectoration with bacilli absent for two years under ordinary conditions of life." Two have moved to other places.

The 12 apparently arrested cases were of the balance of the quiescent cases (18) all of whom had positive sputum. The majority of these are in attendance at the clinic and are approaching the arrested class. Of those who do not attend, some have moved to other places, while some, unmindful of their improvement at the sanatorium, are wilfully neglectful of the opportunity the clinic affords.

The 22 quiescent cases with negative sputum were the 6 remaining cases with positive sputum and 16 of the improved cases. Less than half of these are attendants at the clinic; some cannot be located; others, like some of those in the apparently arrested class, will not come to the clinic.

The 6 improved cases with negative sputum were the 2 remaining improved cases with positive sputum and 4 of the unimproved, none of these can be located.

All who have continued treatment at the clinic have continued to improve, as all fortunately are able to have housing and food conditions, which, while not in all cases equal to those they had at the sanatorium, approximate them to an extent which aids them in their improvement.

#### REPORT OF PATIENTS ADMITTED FROM JULY 16TH, 1915 TO DECEMBER 31ST, 1915

Admitted previously . . . . .	4
Patients admitted from July 16, 1915, to January 1, 1916 . . .	113
	117
Patients too far advanced to remain . . . . .	5
Patients deserting after a short stay . . . . .	1
Died . . . . .	—
	21
	96
Number discharged . . . . .	34
Patients in Sanatorium January 1, 1916 . . . . .	62

*Condition on Admission.*—Only the 34 discharged will be included in the report, as the 8 who were too far advanced and the 12 who deserted were in the sanatorium too short a time to receive benefits from environment, food or treatment.

The classification of the 34 on admission was as follows:

Incipient .....	14
Moderately advanced .....	15
Far advanced .....	5

*Definition of Terms.* It will be necessary to give the National Association's definition of these classes. As they are very lengthy, I will abbreviate them somewhat, as follows:

Incipient: "Slight or no constitutional symptoms, slight or no elevation of temperature or acceleration of the pulse—expectoration absent or small in amount, bacilli may be present or absent; slight infiltration limited to apex of one or both lungs, or to a small part of one lobe; no tuberculous complications."

Moderately advanced: "No marked improvement of functions, either local or constitutional marked infiltration more extensive than under incipient, with little or no evidence of cavity formation, no serious tuberculous complications."

Far advanced: "Marked impairment of function, local and constitutional; extensive localized infiltration or consolidation in one or more lobes; or disseminated areas of cavity formation; or serious tuberculous complications."

Five of the incipient cases had positive sputum, and also all of the moderately and far advanced. The average time in the sanatorium was 4 months, the longest individual stay was 5 months 10 days, the shortest 1 month and 4 days.

*Condition on Discharge.*

Apparently arrested.....	17
Quiescent with negative sputum .....	12
Improved with negative sputum ..	2
Unimproved ..	3

No patient discharged at 4 months can be classified as arrested, as it is impossible to demonstrate a healed lesion in that time. The patient who stayed 1 month and 4 day was an incipient case, with negative sputum, who left against advice and went to Pennsylvania. His pulmonary condition had improved at the time he left. A letter received from him states that his improvement has continued and he is classed among the apparently arrested.

The balance of the apparently arrested cases were the 13 other incipient and 3 of the moderately advanced cases. The 12 quiescent cases with negative sputum were the balance of the moderately advanced. The 2 improved with negative sputum were 2 of the far advanced. Both of these last left against advice, as they had not made improvement in pulmonary lesion to warrant leaving the sanatorium; both are at their homes and under the care of private physicians.

Again I have to report that some of the apparently arrested cases will not come to the clinic, insisting they are all right. The same is true with 5 of the quiescent cases; one of the quiescent cases with bad housing and food conditions retrogressed so markedly that he has returned to the sanatorium, thus emphasizing the fact that scientific treatment will not avail if housing and food conditions are not proper.

The 4 patients in the sanatorium July 16th, 1915, are still in the institution, all have made great improvement in pulmonary lesions, but their bacilli is slow in disappearing.



The condition of the 62 in the sanatorium January 1st, 1916, is as follows:

Quiescent	10
Improved	40
Unimproved	0

## FINANCIAL REPORT

Expenses, first six months	\$16,749 08
Expenses, second six months.....	19,907 73

Total	\$36,656 81
-------	-------------

Food, per capita, first six months .....	\$ .9366
Food, per capita, second six months .....	5745
Overhead, per capita, first six months ...	.9138
Overhead, per capita, second six months ..	971
Total food and overhead, per capita, first six months...	1 8504
Total food and overhead per capita, second six months.	1 5455
Improvement and repair account, first six months.....	546 66
Improvement and repair account, second six months ...	2,758 63

*Better Food, Less Cost Per Capita.* The lower food per capita for the second six months was due to two reasons, one, that an average of 70 patients was cared for against an average of 50 for the first six months, and the rule that in a household food expenses do not increase in the same ratio as does the increase in members of the family, the same being true in an institution of this kind. Second, that close supervision of food led to less loss through food that could not be eaten and to a better quality of food, so that patients received sufficient caloric value at reduced cost. This per capita saving was attained principally in meats, eggs and milk.

*Necessary Help Provided*—The slightly increased overhead per capita was due to the fact that for efficiency of administration, more help was needed, that many repairs to the building were demanded and a number of improve-

ments essential. It is in this connection, a pleasure to note, that the increased overhead cost was more than counter-balanced by reduced food expenses.

*Betterments in Building* The large increase in improvement and repair account is justified by the results attained. These are a safeguarding of life by fireproofing the ceiling of the boiler room and by the erection of fire escapes.

A safeguarding of physicians in charge and nurses, from a possible source of infection, has been guaranteed by installing a separate pantry for washing dishes in the doctors' and nurses' dining room, thus making impossible any contact between their dishes and those of the patients.

*New Shower Baths Provided for Patients* An improved sanitary condition of the sanatorium has been effected by a sanitary shower bath and individual stationary hand basins in the place of the unsanitary stationary bath tubs, as well as a sanitary drinking fountain has been installed. Sanitary steel lockers have been provided in place of the unsanitary wooden ones, also an extra water heater to insure an additional supply of boiling water for dish-washing purposes. A crockery closet in the dish lavatory has been provided, thus making it impossible for dust and flies to come into contact with dishes after being washed. A third of the interior walls and ceilings have been repainted in such a way as to make them less liable to catch and retain dust.

An increased efficiency of the sanatorium was effected by changing two lounging pavilions into sleeping pavilions to accommodate 16 patients.

## FIELD WORK

The organization of the field work of the Bureau was somewhat delayed by the more pressing necessity for a reorganization of the sanatorium, which required a daily visit on my part for nearly two months, during this time the nurses, whose number had been increased from two to five, were engaged solely in visiting those families who were on the visiting list before the advent of the Bureau, and those which were reported from day to day.

*Systematic Work Begun.*—About the middle of September a reorganization of the field work was inaugurated. Such work had up to this time consisted in the two department nurses visiting homes, giving instructions necessary for the safeguarding of those necessarily in contact with tuberculous cases; in committing the deliberately careless open tuberculous cases to Solio, and in making adjustments in the homes so that a patient could go to a sanatorium. One day in the week was taken for examining applicants for admission to the Verona Sanatorium, and on another day a clinic for treatment was held.

*Intensive Investigations of Home Conditions*—The lines on which the reorganization was laid were much broader; the nurses, in addition to their previous work in the home, took up the investigation of every case coming to the knowledge of the Bureau, such investigations covering, in addition to that ordinarily obtained, the number of exposed adults and children in the family and also of any other occupants of the building who may have been somewhat closely in contact with the one under investigation; the house environment, as to the number in the family, number of rooms, how many of those sleeping rooms, number of beds in sleeping rooms; whether the patient sleeps in a room by himself or herself, or if not, in a separate bed; the opportunity for making a sleeping porch or bed window,

or for giving home care and treatment; whether any tuberculous persons were previous occupants of dwelling or rooms; the number of people in tenement, apartment or two-family house; whether any relations in other parts of the city have tuberculosis, and if so investigate these. Also they investigate the character of the occupations; whether any active tuberculous employees; whether the place of work has a good supply, or otherwise, of fresh air and sunlight. Also the sanitary condition of the homes and place of occupation, and neighborhood of homes and place of occupation, are investigated, also the economic conditions of the home are investigated.

This intensive investigation is undertaken to obtain data bearing on the relation of housing conditions, home and place of employment environment, occupation and poverty, to the problem of tuberculosis, so as to be in a position to formulate a far-reaching effective plan of prevention and control.

*Growth of Field Work*—The number of visits made by the nurses from January 1st to July 15th was 1,790. The record does not show how many families were visited. From July 15th to December 31st, 3,976 visits were made on 775 patients. These visits were made on those, who, for one or another reason, could not be removed to a sanatorium, and on those patients returned from the sanatorium. Return visits are made to ascertain the extent to which the instructions have been carried out; reporting violations of the rules given to them, following this with commitment to Soho if the disobedience of the rules is maintained.

*Follow-up Work*—In the houses of those returned from Sanatoria they endeavor to, as nearly as possible, make the home conditions approximate sanatoria conditions, using both private and public relief organizations for this purpose, and also insure the attendance of such patients at the clinics

Effort is also made to obtain employment for those whose previous character of employment is known to be prejudicial.

*Investigations* In addition to visits the nurses have made 263 adjustments by means of which the infected father or mother has been able to leave the home for sanatorium or hospital treatment

Also 720 investigations coming to the Bureau from various sources have been made, and where the investigation has discovered a patient with tuberculosis, such case is reported back to the Bureau. The value of these investigations is shown in the discovery of tuberculous persons who, but for the investigation, would have gone undiscovered for an indefinite time. Many of these, too, have been active spreaders of infection

The expectation of the Bureau is that when the stress of organization is over, and the vast amount of work accumulated before the chief had a secretary is caught up with, making it possible to meet each day the necessities and demands of that day, the information as to housing conditions it can give to the Health Officer will lead to great improvement in such conditions. If this improvement alone is brought about, it will enable the Bureau to make some headway in the effort to control tuberculosis.

*Important Feature* Another important feature brought out by the investigation is the number of adults and children frequently found exposed in the family of a tuberculous case. Results have showed this information to be of great importance, both from a preventive and curative standpoint

One of the duties of the visiting nurses is to persuade all of such exposed persons to call at the clinics for examination and continued observation

*Dangerous Exposure to Infection.*—Only those in which there is a positive evidence of a disregard for the ordinary procedures to prevent spreading the infection, such as carelessness in the case of sputum; the common use of tableware and of towels; unlimited kissing, sleeping in the same bed with a tuberculous husband, wife, brother or sister, or those who live in crowded rooms with a tuberculous person, where there is insufficient air space and little or no sunlight, are classed as the undoubtedly exposed. The examination of such exposed in the short time this work has been done shows startling results, which will be given under the work of the clinics.

*Poverty, Bad Housing and Tuberculosis.* -We reproduce a photograph taken in this city which graphically shows the causative relationship between poverty, and its consequent bad housing conditions, and tuberculosis.



This is a photograph of a home, in which lived a husband, wife and 3 children. The dimensions of the two rooms are the same, 10x8; on the bed in the inner room was a man sent home from a hospital a week before I saw him; he evidently had but a few hours to live. Racked with a cough which brought up quantities of sputum, he endeavored to expectorate in a sputum cup, but in his weakened condition he more often failed than succeeded in his effort. The sheet, the floor, a small rag rug, his wife's clothing, were saturated with bacilli-laden sputum. Little sunlight, and that for only a short part of the day, found its way into this room. On the corner bunk in the other room two of the children slept. The youngest child, but 6 months old, slept in a carriage. In this room, also, the cooking was done.

As stated earlier in my report, previous to the establishment of the Bureau, there was but one clinic a week held; the only other tuberculosis work done in the city dispensary was three mornings given to examinations for admission to Verona, Soho and Glen Gardner. Monday morning is still given to examinations for admission to Verona.

The applications for admission to the sanatorium during the first six and one-half months of the year were 240. The knowledge that the Board of Health had begun an active campaign against tuberculosis, and that the sanatorium was to be conducted on broad lines, seemed to spread quickly all over the city, and in consequence, since the inauguration of the Bureau five and one-half months—the examinations for admission to the sanatorium have been 292.

In the middle of September, coincident with the beginning of intensive work by the nurses, seven additional clinics were instituted; these were 4 adult pulmonary clinics, 2 children's clinics, 1 laryngeal and 1 surgical clinic weekly; these clinics were started to care for the increased attendance which was confidently expected to follow the work of the nurses, especially that part of it which had in view the examination of all those exposed to a tuberculous person.

*Adult Clinic.* That this confidence was well founded was quickly proven, for the adult attendance jumped from an average of 8 at the former single clinic, to an average of 24 at each of the four adult clinics; at the present time this number taxes the capacity of the clinic to the utmost.

The records of these clinics for the three and one half months of their existence show 104 exposed adults examined, 15% of whom have been found to be tuberculous.





Making a Von Pirquet Test for Tuberculosis

*Children's Clinics.* In the children's clinics 171 exposed have been examined and 75% found to be tuberculous. These children have ranged in age from 6 months to 15 years. A comparison between this percentage and that of the results of exposed adults shows the special susceptibility of children to the infection. Very few children will escape infection in a home, where the father, mother, brother or sister with open tuberculosis is careless with sputum or neglectful of the instructions given by the nurse upon the necessity of using separate dishes and towels, of a separate sleeping room, if possible, and absolutely a separate bed, and of refraining from kissing.



The large number of children found to be infected is an unanswerable argument for an open-air school as a part of every school, and for a preventorium for children. If these figures hold true through month after month of investigation in the future, how appalling will be the number of children found to be infected, who, if not properly cared for, will eventually keep full the ranks of the adult, dangerous, open pulmonary cases! The home, a photograph of which appears on page 139 is but one of thousands of the same kind in the city, and the photograph of the two infected children is an example of what will occur in every one of these homes.

*Laryngeal and Surgical Clinics*—In the two other clinics established, laryngeal and surgical, the attendance has not grown so rapidly, the average attendance of each being at this date 8.

The clinics are not confined to the examination of exposed adults and children, but also give scientific treatment to ambulatory negative sputum cases, and to returned Verona cases.

*The Value of Clinics*—The clinics are thus of great economic value to the city, as they permit the ambulatory case, with negative sputum, to receive treatment and remain at work, thus insuring the earning value of such patients to the home.

The same holds true with the arrested, apparently arrested and negative sputum cases returned from Verona, as these are encouraged to work and continue treatment at the clinics.

Another branch of the work of the Bureau is the attendance on those far advanced cases coming under observation of the nurses, who have no physician. The clinical assistant who does this work has visited since the establishment of the Bureau 100 such patients. In the majority of these he has been able to secure admission to a hospital or to Soho.

*The Need for Local Tuberculosis Clinics.* The Bureau has knowledge of a large number who should attend the clinics, who cannot do so because of the distance they have to come. Some of these are mothers, and the time consumed in coming to the clinic, waiting their turn and getting back home is prohibitive. Others are men who work so far away from the clinic that they cannot get to it in time. Others are children whom mothers cannot bring, because of the distance to the clinic.

Thus there are many who are not only deprived of the educational advantages of the clinics, but also lose the

opportunity of an early recognition of tuberculous infection, thus demonstrating the need of clinics in various parts of the city. I should consider myself negligent of my serious duty did I not call attention to this need and urge the establishment of such clinics.

In closing this report I must express a conviction long held and more firmly established by my experience as chief of the Bureau for the past five and one half months; this conviction is that tuberculosis—in Newark the most demanding problem in preventive medicine—has among the chief underlying causes, poverty and bad housing. Improvement in such conditions is made more imperative by our limited sanatorium accommodations. Bad housing may be bettered by the enforcement of the State Tenement House Law and of the ordinances of the Board of Health, and it is my hope to have the Bureau, in the coming year, constitute a large factor in bringing about such an improvement as contemplated.

Respectfully submitted,

THOMAS N. GRAY, M. D.,

*Director*



Pharmacy at City Dispensary.



Record and Information Desk.—City Dispensary.



ANNUAL REPORT  
OF  
**THE CITY DISPENSARY**





## The City Dispensary

The present system of special clinics in the City Dispensary originated 24 years ago. One department was added after another until at the present time we have in the City Dispensary, special clinical divisions for all the main branches of medicine and surgery.

The development of the Dispensary from its modest beginning has been to-day's profession and our eventual success has been entirely due to the unselfish work of long-credited physicians who have given their time unstintingly in the past, without any thought of remuneration.

The spirit displayed by the early workers has been well repaid by the high standard and excellence of the service obtained in these free city clinics. The efficiency of the work accomplished in our clinics has attained a high plane and credit for this must also be accorded to the generous supply of modern instruments provided by the Board of Health.

The general plan or outline for the new clinics of the City Dispensary was developed as the result of visits paid to medical centers of high standing in the country.

### GENERAL ARRANGEMENTS.

The Pharmacy and separate rooms for clinics occupy the entire second floor of the Board of Health Building.

The surgical department is equipped in every detail for aseptic work and includes an up-to-date operating room for the performance of minor surgical operations.

The genito-urinary department has its special requirements for cystoscopy and other means for diagnosis. Each clinic has received consideration according to its own peculiar needs.

The clinic rooms open upon a common corridor which acts as the main waiting room, having a seating capacity for 200 patients. The pharmacy and general information bureau are situated conveniently at the entrance, overlooking the waiting rooms, an arrangement that makes for easy supervision by the Superintendent.

The demands of the clinics have been met by arranging certain days and hours for each clinic at intervals of several days, with the exception of the medical, surgical, tuberculosis and children's clinics, the requirements of which have demanded the holding of daily clinics.

The recent employment of a pathologist for the Dispensary has been found especially useful in the diagnosis of early syphilis, tuberculosis and gonorrhea. Greater freedom in using the Wassermann test has aided in the better regulation of the treatment of syphilis. Patients have learned to recognize the value of this control of treatment and do not discontinue their visits until a negative result is obtained by this test.

Applicants for free treatment in the clinics have increased from an initial attendance of 6 or 7 for each clinic to 30 or 40, and in one clinic a daily average of 90 patients has been recorded. While nearly all who apply are worthy, there are nevertheless a number who could well afford to pay. This abuse of charity would seem to be on the increase throughout the community and its control has been a subject for general discussion. The method employed for determining the worthiness of applicants for free medicine or treatment in the City Dispensary takes the form of an inquiry into the social and financial status of all patients.

When doubt arises in any case, further information is sought by visitation to the homes of the applicants. This method of checking abuse, while resulting in some improvement, cannot be said to be effective in all instances. Some benefit might be attained by the installation of a central bureau of information, which all the clinics could use for their own protection.

We believe that the Newark City Dispensary fulfils the purpose for which it was established, to relieve the sufferings of the worthy poor.

From an economic standpoint, it is of value to the community inasmuch as its particular function has been not alone the relief of established disease, but a means of preventing many diseases from becoming chronic, and in this way preventing many persons from becoming patients in our hospitals as well as, by reason of incapacitating diseases, becoming permanent charges upon the charity of the city itself.



Surgical Clinic at the City Dispensary

**TOTAL ATTENDANCE AT THE CITY DISPENSARY BY MONTHS  
AND DISEASES TREATED**

CLINICS, 1915	Jan	Feb	Mar	April	May	June	July	Aug	Sept.	Oct	Nov	Dec.	Total
Medical	791	719	831	777	643	606	664	674	672	616	677	690	8,063
Surgical	854	870	879	777	743	877	801	778	665	868	772	180	8,795
Skin	218	167	177	166	177	212	177	161	171	187	173	110	2,052
Syphilis	245	267	291	272	177	208	181	175	197	187	173	127	2,450
Children	190	168	167	207	177	206	208	177	186	277	177	160	2,441
Women	84	127	177	117	117	167	177	177	177	177	177	177	1,777
Genito-urinary	487	177	180	185	288	308	277	177	328	177	177	177	2,667
Eye, ear, nose and throat	154	177	118	117	110	127	177	177	177	177	177	177	1,777
Nerve	216	177	177	217	177	177	177	177	177	177	177	177	2,667
Tuberculosis	177	177	177	177	177	177	177	177	177	177	177	177	2,667
Dental	177	177	177	177	177	177	177	177	177	177	177	177	2,667
Vaccinated	177	177	177	177	177	177	177	177	177	177	177	177	2,667
Orthopedic	177	177	177	177	177	177	177	177	177	177	177	177	2,667
<b>Total treated</b>	<b>4,617</b>	<b>4,817</b>	<b>5,017</b>	<b>4,917</b>	<b>4,301</b>	<b>4,717</b>	<b>4,817</b>	<b>4,717</b>	<b>4,617</b>	<b>4,917</b>	<b>4,817</b>	<b>4,717</b>	<b>58,448</b>
<b>Clinic prescriptions</b>	<b>1,777</b>	<b>1,887</b>	<b>1,917</b>	<b>4,212</b>	<b>4,230</b>	<b>4,503</b>	<b>4,855</b>	<b>4,886</b>	<b>4,263</b>	<b>4,380</b>	<b>4,243</b>	<b>4,243</b>	<b>45,761</b>

PATIENTS SENT TO HOSPITALS BY PERMIT ISSUED FROM THE DISPENSARY  
FOR CITY HOSPITAL AND CITY BEDS IN OTHER HOSPITALS

HOSPITAL	Jan	Feb	Mar	April	May	June	July	Aug	Sept.	Oct.	Nov.	Dec	Total
City	96	2	7	11	58	61	29	11	41	50	45	51	497
St. Michael's	9	8	7	8	9	11	12	12	12	9	8	16	121
St. Barnabas'	1			12	11	3	8	1	6	7	7	12	97
St. James'	7	6	7	7	8	9	6	6	6	4	8	8	82
Gertrude	10	12	9	7	1	6	12	12	11	7	5	10	102
Beth Israel	11		17	7	12	1	13	10	11	1	9	8	125
Women and Children's			5	5		3	1	6	8	1	6		35
Home for Crippled Children				6	2	2	2	2	1	8	1	2	25
Eye and Ear Infirmary	16	1		26	18	12	23		27	11	26	21	218
Babies'	15	18	17	22	12	27	21	35	25	16	17	1	218
Tuberculous Sanatorium	13	10	12	11	17	13	11	24	15	16	15	26	171
Total	187	177	88	187	151	176	149	160	161	144	141	177	1,923

VACCINATIONS IN THE CITY DISPENSARY AND  
PUBLIC AND PAROCHIAL SCHOOLS SINCE 1901

1901 . . . . .	28,288
1902 . . . . .	26,043
1903 . . . . .	4,671
1904 . . . . .	5,555
1905 . . . . .	8,243
1906 . . . . .	3,052
1907 . . . . .	1,954
1908 . . . . .	1,540
1909 . . . . .	1,401
1910 . . . . .	5,156
1911 . . . . .	5,828
1912 . . . . .	6,300
1913 . . . . .	5,537
1914 . . . . .	5,414
1915 . . . . .	7,478
Total . . . . .	116,460

# DISTRICT PRESCRIPTIONS—1915

DISTRICT	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
First	97	124	1	2	18	18	11	8	33	19	11	111	49
Second	66	5			8	1	1		26	2		23	10
Third	70	63		8		5	28		29	17		4	19
Fourth	109	91		8	1		11	8	1	1		51	23
Fifth	79	82	2	1	3	1			37	19		16	16
Sixth	46	38					20		98	1	2	5	10
Total	467	450	17	391	257	287	231	275	247	223	242	331	3,870

## RECAPITULATION

Total number of patients treated	38,848
Total number of Prescriptions	55,139
Total number of patients sent to hospitals	1,060
Total number of vaccinations	7,478

# SUMMARY OF SERVICES RENDERED BY THE DISTRICT PHYSICIANS

	1891	1892	1893	1894	1895	1896	1897
Actual No. of houses visited	100	100	770	510	208	103	200
Actual No. of families visited	800	200	180	50	101	10	300
No. of sick prescribed for	917	208	80	651	100	10	625
No. of sick treated by others	0	0	28	11	8	8	0
Total No. visits made	1184	208	1200	700	100	100	100
No. sent to hospitals	32	11	90	0	0	0	10
No. of deaths	13	7	0	0	1	1	0



## REPORT OF MEDICAL INSPECTION OF PAROCHIAL SCHOOLS

There are twenty-five parochial schools in the City of Newark, which are divided into five districts. Five physicians are detailed as Medical Inspectors, whose duties are to visit the parochial schools daily between the hours of 9 and 11 A. M., and make weekly and monthly reports to the Health Officer

### First District—Dr. H. C. Povey, 89 Mott Street.

St. James' School, 185 Elm Street .....	17	30
Our Lady Mt. Carmel School, 391 Market Street	20	
St. Benedict's School, 63 Komorn Street		
St. Aloysius' School, 36 Freeman Street	5	
St. Casimer's School, 95 Tyler Street	64	
St. Mary Magdalene's School, 35 Esther Street	98	

Total .....

### REPORT OF MEDICAL INSPECTION OF PAROCHIAL SCHOOLS OF DISTRICT NO. 1, FOR 1915

Number of schools visited daily	6
Number of school days during year	102
Total number of visits during year	1212
Number of pupils examined (male)	2,135
Number of pupils examined (female)	2,783
Total number of pupils examined...	4,918
Number of pupils excluded from school	30
Number of physical examinations (male)	78
Number of physical examinations (female)	87
Total number of physical examinations ..	165
Number of pupils found defective.....	84

DISEASES DISCOVERED DURING YEAR BY MEDICAL  
INSPECTOR OF DISTRICT NO. 1

Skin diseases	76
Tuberculosis	1
Eye diseases	1
Ring worm	1
Vermin	1
Ear diseases	1
Tonsilitis	1
Bitten by dog	1
Other diseases	147
Total	248

Number of vaccinations made at the schools	704
Number of pupils advised to seek treatment	1,670
Number of classrooms inspected	2115
Number of classrooms disinfected	1

Second District Dr. H. G. McBride, 248 Mulberry  
Street

St. Columba's School, 38 Pennsylvania Avenue	730 pupils
St. Bridget's School, 404 Plane Street	100 "
St. Mary's School, 119 William Street	100 "
St. Phillip's School, 500 North Second Street	100 "
St. James School, 33 Mulberry Street	100 "
St. Patrick's School 700 North Avenue	100 "
Total	1,130

REPORT OF MEDICAL INSPECTION OF PUBLIC  
SCHOOLS OF DISTRICT NO. 2, 1911

Number of schools visited daily	1
Number of school days during year	180
Total number of visits during year	180
Number of pupils examined (male)	147
Number of pupils examined (female)	100

Total number of pupils examined. ....	420
Number of pupils excluded from school. ....	27
Number of physical examinations (male).....	113
Number of physical examinations (female) .....	20
Total number of physical examinations.....	133
Number of pupils found defective.....	9

DISEASES DISCOVERED DURING YEAR BY MEDICAL  
INSPECTOR OF DISTRICT NO 2

Mumps .....	1
Skin diseases .....	70
St Vitus dance. ....	3
Chicken pox .....	4
Eye diseases .....	24
Ring worm .....	1
Vermis .....	4
Ear diseases .....	18
Tonsillitis .....	20
Bitten by dog. ....	1
Other diseases.....	158

Total..... 301

Number of vaccinations made at the schools.....	240
Number of pupils advised to seek treatment... ..	251
Number of classrooms inspected. ....	221
Number of classrooms disinfected .....	1

Third District—Dr. M. J. Coffey, 216 Bank Street.

St Michael's School, 172 Bellevue Avenue	503 pupils
St Lucy's School, Amity Place .	200 "
St Augustine's School, Jay Street	275 "
Sacred Heart School, 88 Sixth Avenue	230
St Rose of Lima School, 546 Orange Street.	130
Our Lady of Good Counsel School, 18 Heller Park way	250 "
	-
<b>Total.....</b>	<b>2,088</b>

REPORT OF MEDICAL INSPECTION OF PAROCHIAL  
SCHOOLS OF DISTRICT NO. 3, FOR 1915

Number of schools visited daily.....	6
Number of school days during year..	187
Total number of visits during year....	1,122
Number of pupils examined (male) .....	5,583
Number of pupils examined (female)..	4,946
Total number of pupils examined ....	10,529
Number of pupils excluded from school ..	296
Number of physical examinations (male) .	1,612
Number of physical examinations (female) ..	1,364
Total number of physical examinations ....	2,976
Number of pupils found defective.....	311

DISEASES DISCOVERED DURING YEAR BY MEDICAL  
INSPECTOR OF DISTRICT NO. 3

Mumps .....	1
Skin diseases .....	62
Scabies .....	4
Whooping cough .....	1
Tuberculosis .....	1
Eye diseases .....	70
Ring worm .....	31
Vermis .....	26
Ear Diseases .....	20
Tonsilitis .....	37
Other diseases .....	65
Total .....	318
Number of vaccinations made at the schools .....	396
Number of pupils advised to seek treatment..	398
Number of class-rooms inspected .....	280
Number of cultures taken.....	3

Fourth District—Dr. P. J. Clark, 215 South Tenth Street.

St. Joseph's School, 168 Hudson Street .....	1,348 pupils
St. Antoninus' School, 319 South Ninth Street .....	550 "
Sacred Heart School, 1049 South Orange Avenue..	226 "
Total .....	2,124 "

REPORT OF MEDICAL INSPECTION OF PAROCHIAL  
SCHOOLS OF DISTRICT NO 4 FOR 1915

Number of schools visited daily . . . . .	3
Number of school days during year . . . . .	189
Total number of school days during year . . . . .	567
Number of pupils examined (male) . . . . .	215
Number of pupils examined (female) . . . . .	109
Total number of pupils examined . . . . .	324
Number of pupils excluded from school . . . . .	0
Number of physical examinations (male) . . . . .	73
Number of physical examinations (female) . . . . .	25
Total number of physical examinations . . . . .	98
Number of pupils found defective . . . . .	"

DISEASES DISCOVERED DURING YEAR BY MEDICAL  
INSPECTOR OF DISTRICT NO. 4.

Skin diseases . . . . .	84
Eye diseases . . . . .	3
Ring worm . . . . .	21
Vermin . . . . .	11
Ear diseases . . . . .	16
Tonsillitis . . . . .	61
Other diseases . . . . .	125
Total . . . . .	321
Number of vaccinations made at the schools . . . . .	56
Number of pupils advised to seek treatment . . . . .	3,7
Number of class-rooms inspected . . . . .	2,458

Fifth District Dr. D. R. Campbell, 550 Bergen Street.

St Stanislaus' School, 120 Livingston Street . . . . .	520 pupils
St Peter's School, 24 Livingston Street . . . . .	600 "
St Ann's School, 380 South Seventh Street . . . . .	411 "
St Charles Borromeo's School, 92 Custer Avenue . . . . .	734
Total . . . . .	2,854

# REPORT OF MEDICAL INSPECTION OF PAROCIAL SCHOOLS OF DISTRICT NO. 5 FOR 1915

Number of schools visited, daily	4
Number of school days during year	
Total number of school days during year	
Number of pupils examined (male)	
Number of pupils examined (female)	
Total number of pupils examined	
Number of pupils excluded from school	
Number of physical examinations (male)	
Number of physical examinations (female)	
Total number of physical examinations	
Number of pupils found defective	

## SICKNESS REPORTED DURING YEAR BY MONTH, OF DISTRICT NO. 5

Ring worm

Vernon

Fur die

Toxistis

Other disease

Number of vaccinations made at the schools

Number of pupils advised to seek treatment

Number of classrooms inspected

ANNUAL REPORT  
OF THE  
METEOROLOGIST





ANNUAL REPORT  
OF THE  
METEOROLOGIST

*Charles V. Croster, M. D., D. P. H., Health Officer, Board  
of Health, Newark, N. J.:*

DEAR SIR:—I herewith submit the following meteorological report for the year 1915.

JANUARY WEATHER

The New Year opened bright, cold and clear. The second day, however, was cloudy, cold and marked by snow flurries. Then there came several days of clear weather, followed by rain on January 5 and 6, with high westerly winds on January 7. Four clear, mild days preceded the very wet January 12 and 13, on which days a total of 3.62 inches of rain fell and the wind blew in an easterly and north easterly direction at times at the rate of 24 miles per hour. It rained on January 15, 17, 18, 23, 24, 25 and 31. It snowed on January 22, 25 and 31. The total rainfall for the month was 8.10 inches; the snowfall 3.55 inches. A large lunar halo occurred on January 30. There were 13 days in January on which it either rained or snowed.

FEBRUARY A DRY MONTH

A rainy and sleety day ushered in February. This was followed by snow on February 2 and 3, the only heavy snowy days of the month. In fact, barring the first three days of February, the month was rather dry, the total

precipitation being 4.16 inches of rain and melted snow, which was nearly normal. The total snowfall was 3.25 inches. Candlemas Day was cold and cloudy. Lincoln's Birthday was mild and cloudy, while Washington's Birthday was a very fine, mild day. Heavy fogs occurred on February 23 and 24. Bright lunar halos shown on the nights of February 27 and 28.

#### MARCH RAINFALL, BELOW NORMAL

March began clear and cold, but developed a thirty mile per hour northwesterly air movement and for the first three days did some blowing. On March 6 there started the second heaviest snowfall of the winter, 8.2 inches of snow fell, followed by .50 inches on March 7. Then the days were practically clear till March 22, on which day a gentle rain fell. St. Patrick's Day was particularly mild and agreeable. The total snowfall for March was 11 inches. The rainfall was far below normal, being only .90 inches. Lunar halos were noted on March 23 and March 29.

#### APRIL A FAVORABLE MONTH

April opened cloudy and cold. Good Friday, April 2, was partly cloudy and mild. On April 3 began the heaviest snowfall of the year, 15.75 inches. In places, drifts over 25 inches high formed. This was the last snowfall of the season. Easter Sunday, April 4, was mild and clear. Easter Monday, cloudy and mild. The latter part of the month from April 23 to the end was foggy mornings, with light fog often during the day. On April 25 the thermometer reached 62 degrees, and on April 27 made the record sprint of 64 degrees. After that the temperature settled down to normal. The first thunder and lightning storm of the season came on April 11, the second on April 26, the third on April 27. A small lunar halo was seen on April 23. The total rainfall was only 3.11 inches. This was below normal.

## MAY WITH HIGH WINDS

Three more or less mild, cloudy days ushered in May. Fourteen days had some rain, which, on May 8, 21 and 22 was accompanied with thunder and lightning. On May 20 the wind during a storm blew at the rate of fifty miles per hour and on May 26 at forty-five miles per hour. About 11 30 A. M. on May 20 there appeared a solar halo of great beauty. Memorial Day, May 30, was mild and cloudy. Only 3.28 inches of rain fell during the month.

## JUNE HAS A HAILSTORM

June began with a clear, warm day. A sixty miles per hour easterly wind developed on June 2. After a more or less continued blustery day June 3, too, was rather March like in general character. No precipitation occurred until June 7. On June 14, 93 degrees, the high temperature of the month, was reached. The night of June 8 was marked by a heavy fog. Light fogs and hazes occurred on June 8, 18 and 19. Thunderstorms came on June 11, 15, 16 and 17. June 27 was further interesting because of the fall of hail during the rainstorm, as well as because of the rise of the temperature to 83 degrees and its fall after the close of the storm to 64 degrees. 3.61 inches of rain fell during the June storms.

## JULY LESS THAN THE AVERAGE SUNSHINE

July began with rain and had fourteen days on which it rained. Only about 50 per cent average sunshine per day was the record. The highest temperature of the month, 95 degrees, occurred on July 31. The Fourth of July was cloudy, close and rather muggy. There were thunderstorms on July 8, 13, 17 and 27. High winds marked July 2, 8, 17, 19 and 29. The average temperature was 73.3 degrees for the month.

## AUGUST HIGH WINDS AND RAIN

August began as did July with haze and rain. The rain came at intervals for the first four days, becoming heavy enough, with the downfall of 4.16 inches on the fourth, to stop traffic and with a forty-mile per hour "north-easter" to do considerable property damage. High winds came with the thunderstorm of July 6. On the night of August 20 a beautiful halo shown about the moon. The month closed with a clear, mild day. 7.97 inches of rain had been precipitated.

## SEPTEMBER WITH LITTLE RAIN AND HIGH WINDS

September began with a cloudy, cool day. Comparatively little rain fell during the month, 3.01 inches being the total fall. On September 21st storm the wind blew 45 miles per hour. It did the same on September 26. On September 20 and 27 it blew at the rate of 30 miles per hour. The highest temperature of the month, 93 degrees, came on the ninth, the lowest, 45 degrees, on September 23, 28 and 29. Labor Day, September 7, had a little drizzle in the morning, but the day became clear after noon.

## OCTOBER, HIGH WINDS

October, though starting with a rainy day, had 2.81 inches of rainfall. This was below normal. On only eight of its days was there any precipitation. Columbus Day, October 12, was a mild, clear day. On October 23 the wind blew in a northerly direction about midnight with a velocity of 45 miles per hour. October 30 was a day with high winds, the wind blowing northerly about 1.45 to 2.45 P. M. at the rate of 50 miles per hour. Hallowe'en, October 31, was mild and clear.

## NOVEMBER RAINFALL BELOW NORMAL.

November came in clear, with high northwesterly winds. This month, too, was marked by its below-normal precipitation of 1.48 inches of rain. Election Day, November 2, was clear and mild. High winds blew on eleven days of the month. A lunar halo shown on November 20. Thanksgiving Day, November 25, was a fine, cool day. The first frost came on November 7. The month closed with a clear day. The highest temperature, 70 degrees, was noted on November 1; the lowest, 29 degrees, on November 18, 23 and 30.

## DECEMBER ANOTHER DRY MONTH.

December 1 was a cloudy day. The first snowfall of the winter fell on December 2. Another snow came on December 8. The first heavy snowfall began on December 13 and continued until 7 A. M., December 14. Nine inches fell during this storm. On December 12 there was skating at Verona and on Crystal Lake. Large lunar halos were observed on December 16 and 20 and a small one on December 22. Despite the total snowfall of 11.45 inches, the total precipitation in inches of rain and melted snow, 3.56 inches, was below normal.

The high temperature was 54 degrees on December 25, the low, 17 degrees, on December 31.

Appended to this report, you will find a set of meteorological statistics for the year 1915 and comparisons with the statistics of other years.

Respectfully submitted,

WILLIAM WIENER,

*Meteorologist.*

## CHARACTER OF THE DAYS IN 1915

MONTH	Clear (Cloud less)	Partly Cloudy (Fair)	Cloudy Sun- less)	Days in which precipita- tion occurred
January		1	17	13
February			13	8
March	9		8	3
April	13		12	12
May	16	2	9	14
June		2	12	10
July	8	1	3	15
August			15	15
September	16		6	7
October	16	2	14	9
November	11	2	14	8
December	8		11	9
Totals	101	8	117	141

## EXCELLENGLY COLD OR HOT DAYS

Average number when tempera-      Average number when tempera-  
ture fell below freezing,      ture rose to 90 degrees  
32 degrees Fahr      or above

MONTH	1914 to 1915	MONTH	1912 to 1915	1915
January	1	May	1	
February	2	June	3	1
March	1	July	6	5
April	1	August	3	1
October		September	1	5
November	8	October	1	
December	20			
Totals	96	Totals	14	12

## PRECIPITATION IN INCHES

MONTH	Rain and Melted Snow			Total Snow Unmelted	
	Period 1843-92	Period 1892-15	Average 15	Period 1843-92	Average 15
January	5.0	5.0	5.1	7.0	7.0
February	5.0	5.0	5.1	7.0	7.0
March	5.0	5.0	5.1	7.0	7.0
April	5.0	5.0	5.1	7.0	7.0
May	5.0	5.0	5.1	7.0	7.0
June	5.0	5.0	5.1	7.0	7.0
July	5.0	5.0	5.1	7.0	7.0
August	5.0	5.0	5.1	7.0	7.0
September	5.0	5.0	5.1	7.0	7.0
October	5.0	5.0	5.1	7.0	7.0
November	5.0	5.0	5.1	7.0	7.0
December	5.0	5.0	5.1	7.0	7.0
Totals	5.0	5.0	5.1	7.0	7.0

NOTE. One inch of melted snow averages one-tenth of an inch of rain.

## TEMPERATURE CHART IN FAHRENHEIT DEGREES.

MONTH	Mean Tempera- ture (monthly)			Maximum Recorded		Minimum Recorded	
	1843 to 82	1892 to 1915	1915	1843 to 1915	1915	1843 to 1915	1915
	1843	1892	1915	1843	1915	1843	1915
January	3	34	41	6	5	-	6
February	4	27	34	6	5	-	6
March	8	33	39	83	60	5	10
April	9	41	55	91	64	22	28
May	50	45	50	85	70	4	4
June	59	50	52	90	76	5	5
July	64	54	57	92	77	10	7
August	70	52	56	88	76	6	6
September	60	50	50	88	60	4	3
October	50	40	46	80	80	27	3
November	30	33	40	76	50	10	20
December	30	32	37	65	50	-	-

NOTE—Lowest temperature of the year, 1843, 1844, January.

Highest temperature of the year, 1843, July 1. Annual mean, 1843, 1842, 53°. Annual mean, 1892, 1915, 51°. Annual mean, 1915,



## MISCELLANEOUS INCIDENTS OF YEAR 1915

MONTH	BAROMETER			Average Direction of Wind	Humid- ity Average	Per Cent of Sunshine
	Highest	Lowest	Mean			
January	30.15	29.70	29.93	North	67	47
February	30.00	29.75	29.88	North	67	51
March	30.00	29.65	29.83	North	64	55
April	30.00	29.65	29.83	Northwest	66	60
May	30.05	29.55	29.80	North	66	46
June	30.00	29.60	29.80	Northeast	62	51
July	30.08	29.58	29.83	North	69	50
August	30.20	29.74	29.97	Northwest	70	49
September	30.35	29.69	30.02	North	65	69
October	30.07	29.80	29.93	West	66	55
November	30.18	29.25	29.87	Northwest	65	47
December	30.45	29.20	29.83	Northwest	68	41

NOTE. Annual mean barometer, 29.95. Prevailing direction of the wind north. Highest barometer recorded for 1915, November 18. Lowest barometer recorded for 1915, December 26.



ANNUAL REPORT

OF THE

**Bureau of Child Hygiene**



ANNUAL REPORT  
OF THE  
BUREAU OF CHILD HYGIENE  
DEPARTMENT OF HEALTH

*Dr. Charles V. Craster, Health Officer, Department of  
Health, Plane and William Streets, Newark, N. J.*

DEAR SIR:—I herewith present the report of the Bureau  
of Child Hygiene for the year 1915.

Respectfully submitted,

JULIUS LEVY, M. D.,  
*Director*

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ORGANIZATION

BUREAU ESTABLISHED AUGUST, 1913

	1914	1915
Appropriation .	\$6,000	\$10,000. \$299.31 extra
Staff . . . . .	1 Director	1 Director
	1 Secretary	1 Secretary
	1 Clinic Physician	3 Clinic Physicians
	3 Teachers of Infant Hygiene	9 Teachers of Infant Hygiene
		1 Supervisor of Midwifery and Boarding Homes

## ACTIVITIES

- Present
- 1 \*Pre-natal care of expectant mothers
  - 2 \*Supervision for one year of babies delivered by midwives and in wards of hospitals
  - \*Little Mothers League at each school.
  - 4 \*Nine consultation stations with 18 conferences each week in schools
  - \* Supervision of midwives
  - 6 Supervision and licensing of boarding homes for infants
  - 7 Supervision of Day Nurseries
  - \* Wet nurses' directory
  - 9 Prevention and supervision of ophthalmia neonatorum bacteriologic examinations are made of all purulent discharges among supervised babies
  - 10 Detection and curing of hereditary syphilis. Wassermann and Noguchi tests made in all cases of malnutrition among supervised babies
  11. Housing Sanitation Poverty Unmarried mother problem., reports made and taken up with various departments, City and private
- For 1916
- 1 Extend supervision of children to school age
  - 2 Establish convalescent home for mothers
  - 3 Establish obstetrical out patient department.
  - 4 Establish Municipal School of Midwifery
  - 5 Establish children's dispensaries in congested neighborhoods

Future Extend present activities and units to entire City.

\* Limited to wards 1st, 3rd, 7th and 15th (1/2 of total births of City).

## BUDGET, 1915

Cost of Supervision—\$4.00 per baby

## Personal Services

1 Director .....	\$1,450 00	
1 Secretary ....	720 00	
9 Teachers .....	4,444 44	
1 Supervisor of midwifery . . . . .	490 00	
3 Clinic Physicians ..	709 11	
		\$ 7,813 55

## Supplies—

Stationery, records, etc., ....	\$ 431 33	
Literature ... ..	33 00	
Exhibit .....	157 00	
Equipment .....	1 14 00	
		1,823 33

## Fixed Charges—

Telephone . . . . .	\$ 75 90	
Rent—Office .....	28 00	
Rent—Consultation station .....	75 00	
		410 82

## Contingency

Petty Cash Telephone, carfare, small merchandise .....	251 71	
--	--------	--

Total .....	8,485 41	
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## STATISTICAL SUMMARY

	1915	1914
Infant Mortality Rate in the City of Newark	85.3	98.3
Deaths under one year . . . . .	935	1,122

This is a percentage reduction of 13%; if the rate of 1914 had continued in 1915 Newark would have lost **154 babies** more than it did this year.

Infant mortality rates in wards where the babies were supervised by the Bureau of Child Hygiene

Wards	1915	1914
1	72	88
3	73	80
6	88	145
8	89	102

Supervision began in August, 1915

**For Comparison** Infant Mortality Rates in the eight largest Cities of the United States from whom we have been able to receive reports for 1915

Cities	Infant Mortality Rate	Cities	Infant Mortality Rate
St. Louis . . . . .	82.07	Buffalo	108.2
New York . . . . .	98.2	Chicago	114.3
Boston . . . . .	104	Cleveland	118
Detroit . . . . .	104.6	Baltimore	118



Infant mortality rates in wards of city **not supervised:**

Much Higher		Very Little Lower		Much Lower	
Wards	Infant Mortality Rate	Wards	Infant Mortality Rate	Wards	Infant Mortality Rate
2	64.1	8	71.1	16	54.0
4	119.4		68.6	11	40.6
5	114	3	69.1		
6	165.1				
7	111				

Wards 1 and 3—Congested, foreign born

Wards 8 and 9—Residential, native born

Ward 13—Mostly two family houses

DEATH RATE AMONG BABIES SUPER-  
VISED BY BUREAU OF CHILD HYGIENE

Death rate among babies supervised by Bureau of Child Hygiene, 10.3

This is based on deaths occurring after our first visit, which was usually after the second week of birth, and should not be contrasted with the city's rate

GIVEN TO ARREST OF GAY VICE AND MURDER  
Only One Baby Under One Year Allowed to Each Boarding House



## BABIES SUPERVISED

Forward from 1914 . . . . .	675
Births in 1915 . . . . .	1,447
Deaths . . . . .	123
	1914
Nurses' visits to Homes . . . . .	14,247 5,163
Mothers' visits to Consultation Stations . . . . .	5,247 2,554
Expectant mothers receiving pre natal care . . . . .	390 52
Members of Little Mothers' Leagues . . . . .	240 60
Midwives supervised . . . . .	100
Boarding Homes for Infants	
Licenses granted . . . . .	40
Number of boarded-out infants under supervision . . . . .	32
Number inspected . . . . .	110
Ophthalmia Neonatorum	
Number of cases supervised . . . . .	9

The infant born in our most congested **but supervised**, Wards 1 and 3, has as good a chance to survive the first year of life as the one born in our finest and richest residential section (Ward 8).



## DEATHS UNDER ONE YEAR

YEAR	DEATHS		Still Borns
	Under One Year	Under One Month	
1905	4	390	567
1911	11.7	459	459
1915	8.8	4	-
1911	8.8	11	-

	Proportion of total deaths in year occurring at ages under one month	Proportion of total deaths in City occurring at ages under one
1915	44%	16.84
1911	40%	19.1

From 1901 to 1905 the *deaths under one year* represented 20.60 of the total deaths; from 1906 to 1910 this proportion increased to 21.0; from 1911 to 1913 decreased to 19.73 and in 1915 it decreased to 16.98

There has been a marked reduction in the actual number of deaths under one year, in the infant mortality rate for 1915 and in the proportion of total deaths in the City occurring at ages under one year. Only a slight reduction has occurred in the number of deaths under one month, without any reduction in the actual rate, since there were fewer

births in 1915. There has been an increase in the number of still births and in the rate for still births per thousand living births.

*One hundred and eighty seven fewer babies died in 1915 than in 1914, and the reduction in infant mortality rate represents a saving of 13% in the rate. This saving of life under one year has been effected by the prevention of sickness and death in the age group over one month, while no reduction has taken place in the age group under one month and an actual increase has occurred in the still births.*

DEATHS UNDER ONE MONTH. Prematurity and congenital debility are given as the cause of death in a little less than half of all the deaths under one month. In 1914, injuries at birth were given as the cause of 29 deaths, while in 1915 in 14 instances. It is not at all unlikely that our supervision of midwifery practice and our impressing upon the midwives the importance of calling a physician promptly in all difficult cases, has contributed to this result.

These figures bear out our contention that while the education and supervision of mother and baby has accomplished much for the City, and will accomplish even more as it is extended to the entire City, we must give more attention to pre natal and obstetrical care if we would prevent the large number of still births and deaths under one month. This phase of the work will probably be the main activity in the year 1916.

#### SEASONS.

The greatest number of deaths under one year in any one month occurred in August. While more deaths occurred in July than in June, the number was less than in April and only a little more than in January and October. In 1915 the deaths under one year in the month of July

were 88, while in 1914 they numbered 129. All months show a death rate of 15, except January and April. While intense heat and humidity undoubtedly affect infant mortality, it would seem from our experience that preventive hygiene methods can neutralize these factors. It should not be forgotten that the cold months of the year have an equally harmful effect on the immature and premature infants and increase deaths under one month.

### CAUSES OF DEATH UNDER ONE YEAR

**DIAGNOSIS.** It is not safe to deduce too much from given causes of death under one year, especially of those under one month of age, as can be gathered from some of the questionable diagnoses given below, which are transcripts of records received at the City Clerk's office, viz

Age	Diagnoses	Age	Diagnoses
2 hours	Uterine hemorrhage	7 days	Meningitis
4 hours	No cause of death	2 days	Pneumonia
1 day	Acute gastritis	2 days	Encephalitis
1 day	Acute gastritis	4 days	Gastro enteritis
1 day	Pneumonia	4 days	Cerebro spinal meningitis
1 day	Inanition	14 days	Acute endocarditis
1 day	Acute endocarditis	1 mo 20 days	Endocarditis
1½ days	Inviability	10 months	Inanition
2 days	Marasmus	11 mo 22 days	Pernicious anaemia
2 days	Probably heart trouble		Infantile paralysis from birth
2 days	Congenital myocarditis		No cause of death

**IMPERFECT RECORDS.** Two records represented that the infants were two hours old at death when, as a matter of fact, both were still born.

1 Record gave no age

1 Record gave the date of birth as the age at death.

**SYPHILIS.** Syphilis was given as the cause of death for 14 infants that died under 1 year of age in 1914, and for 17 in 1915. Since the total number of deaths from all causes is smaller in 1915 than in 1914, this shows a relative increase. When we recall that according to a careful analysis of still births by autopsy at the Johns Hopkins Hospital, 26% were due to syphilis, we feel safe in saying that syphilis is more frequently the cause of death in infants under one month of age than would appear from the certificates.

**GASTRO-INTESTINAL DISEASE.** In 1914 acute gastrointestinal diseases appeared 310 times, while in 1915 it appeared 204 times as the cause of death. This marked reduction is largely due to the great increase in maternal nursing in this City, not only among babies under our supervision, but also in private practice.

**CONTAGIOUS DISEASES.** Measles and whooping cough were given as the cause of 23 deaths in 1914, against 18 in 1915, while only one death was due to scarlet fever and 3 to diphtheria in 1915. These figures clearly show the need for more effective methods of prevention and care of these so-called minor diseases, particularly in the congested neighborhoods. Hospital facilities are required for the severe complicated cases of measles and whooping cough and more adequate medical supervision for the ordinary cases.

**DISEASES OF THE RESPIRATORY SYSTEM.** In 1914 there were 21 deaths under one year that were ascribed to respiratory diseases, while in 1915 there were only 13.



This is a remarkable reduction during a year in which there was an epidemic of influenza and measles and an increase in the number of deaths from pneumonia among adults. Maternal nursing, better hygiene management, improved nutrition and increased resistance may explain this saving of infant life.

### INFANT MORTALITY RATES

The infant mortality rate in the City of Newark for the year 1915 was 85.3 per thousand births, the lowest ever recorded in this City. In 1915 the deaths under one year were 16.8 of the total deaths of the City, while in 1914 they were 19.8%. In most cities the deaths under one year are one-fifth of the total deaths. The infant mortality rate in New York City for 1914 was 94.6, while that of Newark was 98. In 1915 the infant mortality rate of New York City was 98.2, while that of Newark was 85.3.

While a comparison with the large cities of the country or the record of our City for the past five years is rather encouraging, we believe that it is possible to bring the infant mortality rate much lower.

#### INFANT MORTALITY RATES IN EIGHT LARGEST CITIES OF THE UNITED STATES FROM WHOM WE HAVE RECEIVED FIGURES FOR 1915

Cities	Rate	Cities	Rate
St. Louis . . . . .	82.07	Buffalo . . . . .	108.2
New York . . . . .	98.2	Chicago . . . . .	114.3
Boston . . . . .	104.	Cleveland . . . . .	115.2
Detroit . . . . .	104.6	Baltimore . . . . .	119.8

#### NEWARK, 1910-1915

Year	Deaths under One Year	Infant Mortality Rate
1910	1,232	123
1911	1,062	113
1912	1,103	103
1913	999	93
1914	1,122	98
1915	935	85.3

## INFANT MORTALITY RATES BY ATTENDANT AT BIRTH

ATTENDANT	Births	Number of Deaths		Infant Mortality Rate	
		Under	Under	Under	Under
		One Year	One Month	One Year	One Month
Total	10,955	53	1	88	1
Midwife	5,414	1	1	88	11
Physician	4,243	52	0	90	0
Hospital	1,295	11	0	88	1

In considering this table, which shows that the infant mortality rate among babies under one month is more than twice as high among those delivered in hospitals than those delivered by midwives and 50% higher among those delivered by physicians than those delivered by midwives, it must be studied more from the view point of the kind of mothers and character of cases attended, than the kind of work done by the different kind of attendants. The hospitals receive a greater proportion of difficult and protracted labors and naturally in this group of cases a higher mortality occurs in the babies in the first days. Likewise, the physicians are called in to attend cases that require surgical interference and here also there is a higher mortality in the first days of infant life. It is also true that the mothers confined by the midwives are mostly foreign born and recent immigrants who live more physiological lives and give birth to more vigorous infants. After these points have been given proper consideration it may be pointed out that the death rate of infants, particularly under one month, is considerably lower among those attended by midwives than those attended by hospitals or physicians.

## INFANT MORTALITY AND NATIVITY OF MOTHER

Nativity	Infant Mortality Rates		Nativity	Infant Mortality Rates	
	1915	1914		1915	1914
United States...	91.3	111	Germany .....	82.4*	
White .. ....	87.0		Russia ... ..	78.6	63
Colored .....	162.7		Italy .....	71.0	88
Ireland . . . . .	86.7*		England .....	56.0*	
Austria .....	82.8*	131			

\* Rates made from small numbers

There has been a considerable reduction in the infant mortality rate in all groups, except Russia, but even in this group it is lower than the City's rate.

Since our work was carried on in wards occupied principally by Russian, Austrian and Italian mothers this table shows more what can be accomplished than the normal rate of the different classes of mothers. It is worthy to note that the infant mortality rate among native born mothers is much higher than among foreign born mothers. It should be noted that this does not mean only native born mothers of native parentage, but infants of all mothers born in the United States.

It is interesting to consider the high infant mortality among the native born and Austrian mothers in connection with the high illegitimate rate found in these two groups. The high illegitimate rate only, slightly increases the infant mortality rate and should be taken together with the high infant mortality rate as indicating social, moral, economic, environmental and housing conditions that are inimical to a normal moral life for the mother or a healthy physical existence for the baby.

## LATE REPORTED BIRTHS FOR 1915

During the winter months we find a great number of deaths occurring in the first weeks of life among immature, premature and feeble babies which might be prevented if these births are promptly reported. The prompt reporting of all births is of such great value to us because we depend upon these records to enable our nurses to visit new born babies within the first two weeks of life, the most critical period in the first month. That is why we are so interested in having all births recorded and reported at least within five days, as required by law. Our Department will not, however, be able to prevent as many of these deaths as we should until we receive notification of births within twenty-four hours after birth. This practice is followed in England and can be easily established here, especially among the midwives who deliver the babies that we visit, merely by supplying them with an addressed postal card on which they can notify the Board of Health within twenty-four hours of a birth. In this preliminary notification they should be requested to state only the address and the name of the family.

## UNREPORTED BIRTHS

It is a great satisfaction to be able to report a considerable reduction in the number of unreported births, particularly among the midwives. While it is proper to claim that there is no justifiable reason for any births to be unreported, we feel that the midwives are to be complimented on the fact that out of 5,414 births delivered by them only 29 were not reported. The improvement in this phase of midwifery practice can be gauged by the fact that in the early part of 1915 one midwife was charged with nine late birth returns and that since then she has not only reported all her births, but reported them within the five-day limit.

The number of unreported births discovered only represent those that we were able to find by looking for the birth record of all babies that died under the age of one year, so that undoubtedly there are more unreported births than we have included in our statement. Just how many more there are is difficult to say, but from the fact that a large proportion of the unreported births discovered were of babies that died on the first day, we feel justified in believing that the proportion of unreported living births in the City of Newark is surely less than 10%, and probably not more than 5% of the total births.

### BIRTHS.

In 1915 the birth rate was 29.2 on the basis of 375,000, total population. There were 152 fewer births in 1915 than in 1914. This reduction in the birth rate began in May and continued throughout the year. There was a great difference in the number of births in the different months, which should be taken into consideration when comparing the rates in the different months, or the deaths under one month and the still births. In determining the relation between seasons and infant deaths these facts should be considered.

**WARDS.** An increase in the number of births occurred in Wards 3, 5, 7, 8, 9, 10 and 12.

**NATIVITY OF MOTHER.** There was a decrease in births for all groups of mothers except those listed under Russian and others. The proportion of total births attended by midwives is the same as in 1914. The proportion of women attended by midwives among Irish, Italian and native born mothers has slightly increased, while a slight decrease has been noted among the English, German and Russian mothers.

The number and proportion of births delivered in hospitals in 1915 was slightly greater than in 1914—11.8% in 1915 and 11.5% in 1914.

Physicians attended in homes 38.87 of the total births.

That the number patronizing hospitals is not determined by the hospital facilities, by the degree of poverty or the kind of obstetrical care obtainable is indicated by an analysis of the Italian group of mothers who are almost exclusively attended by midwives and are delivered in the most congested quarters and often under the most difficult circumstances.

**Illegitimacy.** The number of illegitimate births in 1915 is exactly the same as in 1914, giving a slight increase in the rate, as there were fewer births in 1915 than in 1914.

Year	Illegitimate	
	Births	Rate
1914	15	13.8
1915	15	13.6

An increase has occurred in the number of illegitimate births of native born and Austrian mothers. The highest illegitimate rate is found among the colored, *i. e.*, 89. When we consider the four large groups of white mothers we find the highest rate among the native white, *i. e.*, 19.

Nativity	Number	Rate	Nativity	Number	Rate
United States	104	23.68	Russia	10	6.18
Colored	23	89.14	Italy	7	2.77
White	81	19.59	England	3	2.39
Austria	19	12.42	Others	4	16.66
Germany	3	10.73			
Ireland	2	7.54			

*Illegitimate Births by Wards.*

—Births—			—Births—		
Wards	Total	Illegitimate	Wards	Total	Illegitimate
First .....	1,206	13*	Ninth .....	539	8
Second .....	259	8	Tenth .....	810	2
Third .....	1,293	15	Eleventh .....	320	3
Fourth .....	252	9	Twelfth .....	735	12
Fifth .....	924	15	Thirteenth ...	837	5
Sixth .....	416	7	Fourteenth ....	1,103	8
Seventh .....	510	17	Fifteenth .....	345	7
Eighth .....	520	1	Sixteenth ... ..	648	5

\* Florence Crittenden Home

The largest number of illegitimate births occurred in the 3rd, 5th, 7th and 12th Wards. The 1st Ward is not included, as the Florence Crittenden Home is located in this ward and receives unmarried mothers from all parts of the city.

When we contrast the total number of illegitimate births in the several wards with the total number of births in these wards the 2nd and 4th stand out very prominently as having an extremely high illegitimate rate.

Wards	Total Births	Illegitimate Births
2	259	8
4	252	9

Part of the explanation for this condition can be found in the fact that the two wards contain a large colored population, many furnished room houses, and a large moving population.

Undoubtedly the records do not give the complete number of illegitimate births, as we know it is the practice for many unmarried mothers to deny this fact. The problems

associated with this class of mothers are manifold and complex and affect the community in many ways. Their babies often become a charge to the City, requiring dispensary, hospital or other institutional care; the mothers, from economic necessity, take up work before they are physically fit and again become a charge to the City either through the dispensaries, hospitals or other institutions.

This group of women is also easily affected by the demoralizing influences of the City and easily are added to the number that spread syphilis and gonorrhoea.

We have found a sufficient number mentally backward, defective and feeble minded to justify a psychological examination of all dependent unmarried mothers. It seems to us, therefore, that it would be of the greatest value to our community to assign a social worker to look after the dependent unmarried mothers and their babies for the purpose of removing the feeble-minded from society and of placing the rest under such physical and moral environment that their welfare, physical and moral, may be safeguarded. The cost would be as nothing in comparison with the immense amount of disease, suffering and misery that could be prevented.



*Congestion and Average Income of 100 Typical Families of Babies Supervised*

No. of families living in—	Ward 1	Ward 3	Wards 7 and 15
2-family houses .....	9	23	23
3-family houses .....	3	21	29
6-family houses .....	5	15	17
8-family houses .....	2	3	2
10 family houses .....	3	0	1
12 and more families per house...	28	4	12
No of persons per room .....	2.3	1.3	1.3
Average size of family...	6.2	4.4	5.6
No of families living in 2 rooms. . .	42	16	8
No of families with more than—			
2 persons per room.....	31	15	17
3 persons per room.....	19	2	7
4 persons per room.....	4	1	0
5 persons per room. . . . .	1	0	0
No. of families having—			
5 persons ....	16	23	17
6 persons... ..	21	9	7
7 persons.....	7	7	12
8 persons.....	13	4	10
9 persons.. . . .	3	3	5
10 persons . . . . .	3	0	4
<i>Average Yearly Income</i>			
Average wage per family	\$4.21	\$557	\$568

This table was prepared by analyzing our reports of 100 families of supervised babies in the respective wards. The 7th and 15th Wards were grouped together because they adjoin each other and because we did not have a sufficient number of records from each ward separately.

The infant mortality rates in the 1st Ward and 3rd Ward are almost identical, and still there is a very marked difference in the housing and economic conditions of these two wards. The 8th Ward, not supervised, with a similar infant mortality rate, is probably our finest residential section.

It is interesting to note, for instance, that in the 1st Ward among 100 consecutively supervised babies we had only 6% living in two-family houses, while in the 3rd, 7th and 15th Wards, 23%; that in the 1st Ward 28% of the families were living in houses containing 12 and more families, while in the 3rd Ward only 4% of the families, and in the 7th and 15th Wards 12% were living in such large tenements; one house in the 1st Ward contains 25 families and several 20 families, while in the 3rd Ward 16 is the largest number.

Real congestion and overcrowding is better represented by stating the number of persons per room and the number of persons per family than by giving the number of persons per acre.

Our table shows that in the 1st Ward the average size of the families is 6.2, while of the 3rd Ward it is 4.4 and of the 7th and 15th Wards 5.6; that in the 1st Ward 31% of the families had at least 2 persons per room, 19% at least 3 persons per room, 4% at least 4 persons per room and 1% at least 5 persons per room, while in the 3rd Ward there was no family with 5 persons per room, only 1% with 4 persons per room, 2% with 3 persons per room and 15% with 2 persons per room, and in the 7th and 15th Wards there were no families with either 4 or 5 persons per room, only 2% with 3 persons per room and 17% with 2 persons per room.

The number of babies that were members of large families also throws an interesting light upon the relative conditions of the respective wards and their relation to infant mortality. In the 1st Ward 21% of the families consisted of 6 persons, while in the 3rd Ward 24% of the families and in the 7th and 15th Wards 7%. In the 1st Ward 13% of the families consisted of 8 persons, in the 3rd Ward 4% and in the 7th and 15th Wards 10%. In the 1st Ward 3% of the families consisted of 10 persons, in the 7th and 15th Wards 4%, and in the 3rd Ward no family had 10 members.

**ECONOMIC RELATIONSHIP.** Of the 100 families the average yearly (estimated) income in the 1st Ward was \$421, that of the 3rd Ward \$557, and the 7th and 15th Wards \$568.

A study and analysis of these figures proves conclusively, I think, that infant mortality cannot be explained by the economic status of families, size of families, congestion, overcrowding or unsanitary conditions in the neighborhood. Maternal nursing is the one condition that far outweighs all other considerations and where this is maintained infants will survive, no matter what the environmental and social conditions are.

### DESCRIPTION OF ACTIVITIES. EDUCATION.

Education has become the basic principle of prevention in Child Hygiene work, just as health is being made the basic condition of education.

**TEACHERS OF INFANT HYGIENE.** The teachers of infant hygiene, who by frequent visits to the homes of the mothers, by intimate personal contact have succeeded in dislodging the long established prejudices and superstitions and substituting scientific methods in the management of infants in place of the many unreasonable practices found among many groups of mothers, have become the best instruments in this health program. While our nurses have tried to teach mothers all that goes with infant hygiene and the proper care of babies, everything has been subordinated to the one essential practice in the proper management and care of infants, that is, maternal nursing.

EDUCATION IS THE BASIS OF PREVENTIVE HEALTH WORK



**LITERATURE.** Literature that likewise emphasizes nursing and incidentally discusses other matters in reference to Infant Hygiene has only been used to supplement this direct method of instruction. Leaflets on "Prenatal Care," "Summer Care" and "Winter Care" have been issued in four languages.

**CONSULTATION STATIONS.** The Consultation Stations, attended by a physician and nurse, have been used largely to intensify the lesson the mother has been learning from the nurse, that practically all women can and must regularly nurse their infants at proper intervals.

**EXHIBIT.** Our exhibit was prepared to develop these same ideas, and therefore has emphasized maternal nursing above all things and has referred only secondarily to other important elements in the proper management of infants.

We have tried to make a point with our nurses and doctors that their function is not to keep one baby well or alive, but so to teach mothers the principles of maternal nursing and Infant Hygiene that eventually the knowledge they are imparting will become incorporated by the neighborhood into regular practice, so that as the years go on it will become less necessary for professional workers to teach mothers these simple and permanent truths about the care of their own babies. Surely the day ought to arrive when mothers will impart to their daughters the few essential truths in regard to the development, training, management and feeding of babies that a mother needs to know to give her child its fullest opportunity for natural growth and progress.

**LITTLE MOTHERS' LEAGUE.** Our Little Mothers' Leagues, organized only in the schools in which we have a consultation station, have been made to serve these same purposes. By having each girl visit one baby each week for a period of

six months and then reporting at the meeting what she has seen and noted, our nurses have been given an opportunity to point out to these girls how a breast fed baby is the healthy, happy baby, how regularity and proper feeding intervals add to the comfort and health of both mother and baby, how crying and discontent comes from poor ventilation, overheating, too frequent feeding, insufficient sleep, cold feet, insufficient and excessive clothing. In this way we have not only prompted the mothers of these girls more readily to accept the teaching of our nurses, but have planted in the minds of our coming mothers that there is a right way and a rational system of bringing up infants, and that there are some people, like doctors and nurses, who know of these rational methods, and that when a mother finds that her baby is not getting along properly she should consult a nurse or doctor instead of a meddling neighbor.

The value of the Little Mothers' Leagues cannot be overestimated. Work of this kind could well be incorporated into the school curriculum, since it not only furnishes the most useful kind of knowledge, but gives an opportunity to develop in the girl mental processes of observation, reasoning and deduction that in the last analysis are the very purposes of education itself.

**PRENATAL CARE.** In the supervision of expectant mothers we have limited our work practically to teaching mothers the importance and value of personal hygiene, of preparing for maternal nursing and of a medical examination during pregnancy if they intend to be delivered by midwives, so that if there is any abnormality or signs of danger proper precautions can be taken.

## MATERNAL NURSING

In our report of 1914 we quoted figures from New York and our own experience that demonstrated that maternal nursing was possible in a much greater proportion of cases than some authorities had stated. An analysis of 978 cases analyzed demonstrated that a little supervision and advice considerably increased the number of breast fed. During the year 1915 we have placed even a greater emphasis upon the value, importance and practicability of maternal nursing and are disposed to ascribe to this whatever success we have had in the prevention of infant morbidity and the reduction of infant mortality.

A census of 888 mothers under our care showed that only 12 babies under six months of age were on the bottle, *or less than 1.3%*. A report by Herman Schwartz, of New York, several years ago showed that of 1,500 mothers attending Dr. Hill's Maternity Clinic 77% nursed at six months; in our own series of cases in 1914 79% were nursing at six months. This great increase in the number still nursing at six months has been accomplished, first and foremost, by the accumulative effect of our educational propaganda for maternal nursing upon the mothers in our district, the midwives who attend these women, the hospitals in which a small proportion are confined, the doctors who have seen what can be accomplished in this direction by perseverance, the charity organizations who have accepted our position that nothing shall be permitted to interfere with maternal nursing. If we have accomplished more in this direction than other cities, it is merely because we have had greater faith in its practicability and have shown more zeal in guaranteeing to each infant this fundamental, inalienable right.

As our prenatal work has increased we have been in touch with the mothers even before the birth of the baby and have been able to inculcate our ideas of maternal nursing well in advance. Many babies are unnecessarily weaned or partly put on the bottle in the first weeks of life because the mother's nourishment for the babies does not seem ample. It is at this time that proper advice in technique, diet, encouragement and any assistance that may be needed will save many a baby from being deprived of its proper nourishment.

We have tried systematically to remove all obstacles and difficulties in the way of successful maternal nursing, and with the assistance of the many agencies interested have succeeded to a most encouraging degree.

**HOSPITALS** We have taken up with the hospitals of this City two practices that, though fairly common in hospitals throughout the country, are wrong in theory and have increased the number of bottle fed. The first is the established idea that hospitals are to concern themselves with the sick only, even though by doing so that may be increasing the number of sick. I refer to the practice of admitting a nursing mother who may need hospital care, but refusing admission to the nursing infant because it is well. Or again, admitting the nursing that requires hospital care, but making no arrangements for the admission of the mother who is to nurse the baby. All the hospitals of the City of Newark have admitted the justice of our position that mother and nursing be admitted together whenever either require hospital care, and all, except a few who are without proper facilities, have adopted this practice.

Another harmful practice of many hospitals is to place on bottles the babies of mothers who request it because the mother states she will have to work after leaving the institution. This applies particularly to the unmarried mother.



and in no other group is this practice so objectionable and harmful. We have taken this matter up with a number of the institutions and have tried to make clear that the function of a hospital was to maintain accepted hygiene and not to solve economic and social difficulties in this fashion, that whenever a mother presents this problem it should be referred to us, in the hope that we will be able to solve the difficulty in a manner that will better conserve the welfare of both mother and baby.

**POVERTY.** This influences maternal nursing markedly only when it makes it necessary for the mother to supplement the family income by working outside of the home, in a lesser degree by making it difficult to obtain sufficient nourishment for the mother. As a result of active and most helpful co-operation between the charity organizations and our department we feel justified in stating that *no infant under six months of age is being deprived of maternal nursing on account of poverty*. Our nurses have instructions to refer promptly to the charity organizations all cases in which any social or economic difficulty seems to interfere with successful maternal nursing, and it is to a very large degree to be credited to this active co-operation that we have succeeded in attaining so high a rate of maternal nursing.

**BREASTS AND NIPPLES.** In private practice it is not very unusual to have maternal nursing interfered with on account of cracked and painful nipples, or caked and abscessed breasts. These two conditions have been so rare among our supervised mothers and so promptly helped through the perseverance and close supervision of our nurses whenever they occurred that I feel justified in saying that they can be entirely prevented by proper hygienic measures. This has also kept up the number of breast fed

**PROLONGING MATERNAL NURSING.** Maternal nursing can be considerably prolonged by supplementary and alternate feeding. Whenever the babies do not seem to make proper progress after two or three weeks of weighing and test feeds, and after we feel sure that the nurses have accomplished all that is possible in regard to the mother's diet, in the housing and environmental conditions, we have supplied one or two supplementary feedings. This has been enough to increase the baby's weight and to keep the mother from worrying that her baby is being starved. Later we increase the supplementary feedings, and, as the time approaches for weaning, place the baby on alternate feedings. This method not only enables us to influence the baby's weight and development, but again demonstrates to the mother and her neighbors the great value we attach to maternal nursing.

**WET NURSES.** In 1915 we sent out five wet nurses to families in the care of private physicians and have probably saved as many lives in this way, besides giving a home and income to five unmarried mothers and their babies. Believing that every baby that needs maternal nursing is entitled to this service, whether rich or poor, we have made it clear that this is obtainable for whatever price a family can pay. We have placed a number of our very poor babies in the Florence Crittenden Home to be wet nursed without cost.

**PUMPED BREAST MILK.** We have sent pumped breast milk on request to families of private physicians, even out of town, and have supplied it in a large number of cases to the babies of the very poor neighborhoods without cost. In this way we have saved many lives and have been able later to place the baby back on the mother's nursing.

## CONTRA-INDICATIONS TO MATERNAL NURSING

We have maintained the position that every mother should be permitted and encouraged to nurse her baby until it can be determined that such nursing is harmful either to mother or baby. We have taken the view that we know the value of maternal nursing, and as long as there are divergent opinions about the possible effect on the mother and baby of diseased conditions in the mother we would be influenced merely by accepted facts.

**TUBERCULOSIS.** As long as an infant of nursing age is to be allowed to remain with a tuberculous mother, to be cared for and fondled by her, we have held that it was best for the baby also to be nursed by her, believing that the resistance and immunity that it obtains in this way would be most useful to combat the infection.

**SYPHILIS.** Whenever nursing infants do not progress properly our doctors are instructed to make a Wassermann on the mother and a Noguchi on the baby. In many cases we have found the mothers to be syphilitic. They have been placed under treatment and allowed to continue to nurse their babies. I believe this field of investigation offers some very good opportunities for detecting latent syphilis and of eliminating a great deal of chronic invalidism. We have suggested to the hospitals, particularly the City Hospital, that a Wassermann reaction should be taken of every woman in the maternity ward. This is being done on every woman admitted to the Florence Crittenden Home, where we obtain our wet nurses.

Hereditary syphilis undoubtedly is the cause of a great deal of malnutrition in early life, anemia, debility and retardation, physical and mental, in later life, epilepsy, feeble-mindedness and idiocy. We believe, therefore, that the detection of every case of hereditary syphilis and its proper treatment and care is of inestimable value to the community, and can best be done through the nurses in touch with the babies and the family history.

## MIDWIFERY.

When we began the study and supervision of midwifery practice we were familiar with the convictions of many of our best obstetricians that midwifery practice is an anachronism and should be eliminated. This is the natural attitude of those who contrast the kind of work and type of women they see in the poor tenement districts with the work and character of men practicing in our well appointed hospitals. We have been influenced in our views, however, by what we have found and by the thought that we were confronted with a condition and not a theory, with a practice long established and not something to be effected merely by our wishes. We have therefore set ourselves the task of raising midwifery practice to the highest standards possible, without any desire, at the present moment, to decide the question whether the best kind of obstetric service is obtainable in this way.

**LICENSE.** Our initial investigation in 1915 revealed the fact that of 107 women practicing midwifery 17 were unlicensed and, according to the law of 1910, which required a two year course of training, were ineligible for license. As a result of a careful investigation into the character of the work of the unlicensed midwife we felt justified in recommending that the State Board of Medical Examiners grant them a license if they successfully passed their examination. This was done for the purpose of giving midwives who had been practicing prior to 1910 in the City of Newark without a license, and in our judgment were qualified so to practice, an opportunity to obtain a license from the State Board of Medical Examiners before we enforced our rule that after 1910 no midwife would be allowed to practice without a license.

As a result of the co-operation of the State Board of Medical Examiners these women were allowed to take the examination though they did not conform with all of the educational requirements. Eleven unlicensed midwives took this examination and obtained their diploma. We now have in the City of Newark 100 registered licensed midwives.

During the past year we have warned several women against practicing midwifery without a license and have received their assurance that they will discontinue. One case was so flagrant and produced such dire results that it was referred to the prosecutor's office for action.

EDUCATION. We have taken the view that the midwives were doing many things that they should not do and were leaving undone many things that they should do merely because they did not appreciate their importance or effect. We have tried, therefore, to educate the midwives and befriend them, rather than prosecute or persecute them.

Our Supervisor attended in 1915 17 confinements and followed the post-partum care in 26 cases. At these visits she instructs the midwives in the importance of cleanliness with regard to their own person, hands and bag, of bed and patient and the essential points in maternal nursing and infant care. Our nurses who visit the babies delivered by the midwives have been instructed to report to the Supervisor all cases of improper advice, undue activity, neglect or carelessness. In this way the Supervisor has an opportunity to discuss these matters again with the midwives.

CONFERENCES. Conferences have been held between the Supervisor, our teachers of Infant Hygiene in a small district and the midwives practicing in that particular neighborhood in order to get the midwives to be friendly disposed to the visits made by our nurses and in the hope that by giving them a clear understanding of what our nurses are trying to teach they will give their mothers the same advice.

The nurses have reported that as a result of this method the midwives have helped our educational propaganda and as in the Italian neighborhood, have successfully established a three-hour interval of nursing with many mothers and have gotten rid of the swabbling band before our nurses arrived. They have furthermore, in the spirit of co-operation, called in our nurses whenever they had premature, immature or weak infants or had difficulty in establishing maternal nursing.

**LECTURES.** During the past summer we established a lecture course for the midwives which prominent physicians in the community kindly agreed to give, but after giving a few of the series they were discontinued because the attendance was so irregular. We feel that the small neighborhood conferences are giving much better results.

**LITERATURE.** Each midwife has been given a book on regulations and rules, which tells her of the requirements and limits set by the Legislature of the State of New Jersey to her practice and gives her some practical information on the care and feeding of mother and baby.

We have also supplied the midwives with leaflets in four languages on prenatal care, which they have been distributing to their patients.

**RESULTS** Our initial investigation in 1915 showed that our midwives were guilty of many infractions of the law and of many practices that were dangerous to mother and baby. One midwife had been regularly using hypodermic injections of strychnine, arsenic and iron for any condition that required medical attention during pregnancy; others had been massaging and plugging out the nipples and breasts of mother or baby; a great many did not use silver nitrate in the eyes of new-born babies, and only a few were regularly using thermometers. These things have been changed to a very large extent. Our Supervisor distributes

silver nitrate to every midwife and has stated that, to the best of her knowledge, it is being used in every case by every midwife. Most of the midwives are now carrying thermometers and taking temperatures.

The reporting of births has improved to such a degree that in the year 1915 only 29 unreported births were discovered among midwives, though they attended 5,414 births, and only 82 births were reported late, while among the doctors, though they attended only 4,243 births, 155 were reported late.

A marked change has occurred among the midwives in their attitude towards difficult labors and abnormal signs or symptoms in pregnancy or the puerperium. Heretofore the practice of many was either to ignore these early signs of approaching trouble during pregnancy, labor or puerperium, or to administer some treatment themselves, or at least to delay the calling of a physician as long as possible. We have considerable evidence from our Supervisor, nurses and from disinterested doctors that the midwives are now calling in physicians very much more promptly and much more frequently. Those who know the importance of time in obstetrical problems will appreciate what a great advance this represents.

As a result of the advice and teaching of our Supervisor most midwives are wearing clean, washable materials at confinements, and some are using gowns. Most of them have lined their bags with washable materials and have made washable receptacles for their instruments and materials.

I wish to mention a detail that I think will explain as much as anything what can be accomplished merely by advice and education. Many midwives were using a large bottle of vaseline for anointing their hands before exam-

ination or for any other purpose for which they may employ this lubricant. After we explained to them the danger of carrying these jars from one patient to another, inherent in this practice, they all substituted for it tube vaseline.

Our experience with midwives in Newark shows that they can be taught to report their births promptly and completely, to restrict their practice to normal cases only, to send for physicians promptly whenever there is the least evidence of abnormality, to teach mothers proper care of themselves during pregnancy and of babies during the time they attend

#### BOARDING OUT OF INFANTS AND CHILDREN.

In July, 1915, the Board of Health passed an ordinance that requires everyone who places out or boards one or more infants under the age of three years, excepting in incorporated placing out societies and State Departments, to obtain a license from this Department.

We devised a system of records whereby we would be informed of every baby placed in or removed from any foster home and of such data that would enable us to keep in touch with the mother or parents of such boarded out children.

In issuing licenses to boarding homes we have tried to adhere to the principle of allowing only one baby under one year of age to be boarded in any one foster home and as many older children as we thought could be properly housed and cared for. Each home is visited by our Supervisor at least once a month, the condition of the home and baby carefully noted and such instructions given as are needed for the proper care and feeding of the baby.



**BABIES UNNECESSARILY BOARDED OUT.** We have tried in every way possible, and in many instances we have succeeded, to prevent the unnecessary boarding out of infants and children. This has been accomplished principally through the assistance of the Florence Crittenden Home, Bureau of Associated Charities and United Hebrew Charities, who have helped couples to maintain their homes intact, unmarried mothers to return to their families or to be placed with their infants in the Florence Crittenden Home, or to devise methods whereby the deserted wife or unmarried mother has been enabled to earn her living and keep her infant with her.

**APPLICATIONS.** 150 applications were received from women who wished to conduct boarding homes. Of these 40 were from out of town, 110 were investigated, and 40 received licenses; 18 infants under one year of age and 14 infants over one year and under three years have been boarded out under our supervision. One of these died and one was adopted, the remaining are in good condition.

The usual charge of boarding homes is \$10 to \$12 a month.

### OPHTHALMIA

In 1913 the prevention and supervision of ophthalmia was assigned to this Bureau.

**METHOD.** We immediately added the detection of ophthalmia to the work of our infant hygiene nurses and required them to make a smear of every purulent discharge among the babies supervised by this Bureau. As this meant every baby delivered by a midwife or in the wards of a hospital, residing in the wards under our jurisdiction, we were in a position to discover if ophthalmia was at all common in this group of cases and to check up the use of silver nitrate by midwives.

Our nurses have sent to the City Laboratory 31 smears taken from infants with purulent conjunctivitis. Of these 8 were suffering from severe forms of purulent conjunctivitis that otherwise would not have been discovered or reported. Of these one showed the gonococcus and 7 other bacteria.

We have looked after 9 cases of gonorrhoeal ophthalmia neonatorum reported to us the latter part of 1915. Of these four were treated in hospitals and 5 were treated at home. Of the 4 treated in the hospitals 2 were cured and 2 are still under treatment. Of the 5 treated at home, 3 were cured and 2 are still being treated. Of the 9 cases reported midwives attended 5, doctors 3 and 1 was delivered in the hospital. It was reported that silver nitrate was used in all cases, but we had no way of proving or disproving these statements.

In 1914, 30 cases of ophthalmia were reported to the Board of Health. At that time no special effort was made to detect cases or impress upon the doctors or midwives the need of reporting them.

In 1915, 33 cases were reported and only 3 additional cases were detected, though our nurses assigned to districts including one third of the total births were continually looking for such cases and sent in 31 smears. It is therefore evident that there is a considerable reduction in the number of cases of ophthalmia, due, in no small measure, I believe, to the greater care exercised by the midwives and to the use of silver nitrate in all cases.

## FLIES.

A recent extensive experiment carried on by the Association for the Improvement of the Condition of the Poor and the Health authorities of New York City fully demonstrated the important relation between flies and summer diarrhea, and brings home to us the urgent necessity of more concerted efforts to get rid of this disease carrier in Newark. We have tried in every way to teach our mothers the importance of protecting infants from flies, but it is almost impossible to do this in the congested neighborhoods where the homes are exposed to the flies that breed in nearby stables and in uncovered refuse and garbage. We therefore feel that this important activity in the reduction of infant mortality should receive the careful attention and co-operation of other Bureaus in the Department of Health as well as other Departments of the City.

## CO-OPERATION.

The full application of modern ideas of prevention in public health requires the most intelligent kind of co-operation between all individuals, City Departments and private organizations that are working for the betterment of the community.

**PHYSICIANS.** We have co-operated with the physicians of the City by trying to supply to their private patients wet-nurses or pumped breast milk at a cost that makes it possible for any family to avail itself of this life saving service. In order not to interfere in any way with medical practice we have instructed our nurses not to visit any baby that is attended by a physician, unless we have received from the physician a request that our nurse continue her instructions

in infant hygiene. Furthermore, we have strictly adhered to the idea that our Bureau was created to conserve health and not to treat sickness, and have referred all cases of illness, no matter how slight, to physicians.

**HOSPITALS.** A very helpful co-operation has been established with our hospitals. All the hospitals of the City, whose facilities permit them to admit babies, have agreed to accept a nursing infant, though well, if the mother, for any reason, requires hospital care, and likewise to permit a nursing mother to remain in the hospital if the infant for any reason requires hospital care. While this question does not arise very often in hospital work, I believe we have scored a real victory for the idea of maternal nursing, which will have an immense educational value upon all who are interested in the care of babies, or are associated with institutional work.

**PRIVATE ORGANIZATIONS** Without the aid of the private organizations of the City it would often have been impossible for us to carry out our propaganda of maternal nursing or to keep mothers and infants together. Without the generous assistance and co-operation of the Bureau of Associated Charities, the United Hebrew Charities and the Florence Crittenden Home much of our work for the prevention of too early artificial feeding and the separation of nursing mother and infant would have been impossible.

**OTHER CITY DEPARTMENTS.** The Poor and Alms Committee of the Common Council have been very much interested in our problem with destitute and unmarried mothers and contemplate establishing a convalescent home for destitute mothers. We shall be very glad indeed to assist in any way possible to make this very important phase of City work a means of solving many of the much neglected problems associated with dependent motherhood.

The City Clerk's office has been most helpful by permitting us to copy the records of all births received, and is now furnishing us with a transcript of all births.

TABLE 1. INFANT MORTALITY RATES BY WARDS.

WARD	Rate	WARD	Rate
First	72.13	Ninth	68.6
Second	106.02	Tenth	88.8
Third	73.4	Eleventh	40.6
Fourth	119.04	Twelfth	116.1
Fifth	111.47	Thirteenth	69.1
Sixth	110.5	Fourteenth	69.8
Seventh	88.2	Fifteenth	89.8
Eighth	71.1	Sixteenth	54.0

TABLE 2.—INFANT MORTALITY RATES BY NATIVITY OF MOTHER

NATIVITY OF MOTHER	Rate	NATIVITY OF MOTHER	Rate
United States	91.1	Austria	82.8
White	87.0	Germany	82.4
Colored	112.4	England	76
Italy	110	Ireland	80.7
Russia	180		

TABLE 3. INFANT MORTALITY BY ATTENDANT AT BIRTH

ATTENDANT	Births	Number of Deaths		Infant Mortality Rate	
		Under One Year	Under One Month	Under One Year	Under One Month
Total	10,955	135	390	85.3	35.4
Midwife	5,414	319	131	58.9	24.1
Physician	4,243	336	157	79.4	37.0
Hospital	1,295	115	65	88.9	50.1

TABLE 4—DEATHS UNDER ONE YEAR AND UNDER ONE MONTH, BY WARDS

WARD	Under One Year	Under One Month	WARD	Under One Year	Under One Month
First	87	41	Ninth	37	19
Second	44	23	Tenth	72	34
Third	95	39	Eleventh	13	8
Fourth	31	13	Twelfth	78	36
Fifth	103	28	Thirteenth	51	27
Sixth	46	16	Fourteenth	77	35
Seventh	45	26	Fifteenth	31	14
Eighth	37	13	Sixteenth	36	2

Non-resident and address unknown not included

TABLE 5—DEATHS UNDER ONE YEAR AND UNDER ONE MONTH, BY MONTHS

MONTH	Under One Year	Under One Month	MONTH	Under One Year	Under One Month
January	88	40	July	88	29
February	56	26	August	113	30
March	72	31	September	77	26
April	96	47	October	84	37
May	69	42	November	62	22
June	60	34	December	57	26

Omitted 13 deaths under one year.

TABLE 6. DEATHS UNDER ONE YEAR AND UNDER ONE MONTH, BY NATIVITY OF MOTHER.

NATIVITY OF MOTHER	Under One Year	Under One Month	NATIVITY OF MOTHER	Under One Year	Under One Month
United States	401	196	Germany	23	7
White	359	173	England	7	1
Colored	42	23	Ireland	23	10
Italy	179	64	Others	36	11
Russia	127	51	Nativity not given	13	.
Austria	126	50			

TABLE 7. DEATHS UNDER ONE YEAR AND UNDER ONE MONTH, BY ATTENDANT AT BIRTH.

ATTENDANT	DEATHS		Births
	Under One Year	Under One Month	
Midwife	319	131	5,444
Physician	336	157	4,244
Hospital	115	65	1,295
Unknown	152	37	
Not stated	13		





[illegible]

DEATHS UNDER ONE YEAR BY CAUSES, SEX AND AGE *Continued*

CAUSES	One Day		Less Than One Day		One Week		Less Than One Week		One Month		Less Than One Month		One Year		Less Than One Year		Under One Year						
	Under One Day		Under One Week		Under One Week		Under One Month		Under One Month		Under One Year		Under One Year		Under One Year		Under One Year						
	Two Days		One Week		Two Weeks		Less Than One Month		Three Months		Six Months		Nine Months		One Year		Under One Year						
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F					
	8	5	3	18	5	2	7	30	8	3	30	20	26	4	23	104	70	66	70	49	46	194	41
119 Other diseases of the intestines			1																				1
120 Acute nephritis																							1
121 Bright's disease																							1
122 Other diseases of the kidneys and annexa																							1
123 Acute abscess																							1
124 Congenital malformation (still births not included)																							1
125 Congenital debility (icterus and sclerema)	8	4	2	1	3	1			6	5	2	1	1										38
126 Other diseases peculiar to early infancy	8	26	2		27	15	1		15	10	29	6	1										27
127 Absorption of deleterious gases (conflagration excepted)	2	7	7	1	1	2	1		1		1												57
128 Effects of the heat																							1
129 Effects of cold																							1
130 Cause of death not specified or ill defined	1				1																		1
Totals	16	55	38	19	54	38	36		76	64	174	136	95			694							

TABLE 9. DEATHS UNDER ONE MONTH, AND OVER ONE MONTH AND UNDER ONE YEAR, BY PRINCIPAL DISEASE GROUPS.

CAUSE	Under One Month	Over One Month and Under One Year
Contagious diseases . . . . .	1	25
Diseases of the respiratory system . . . . .	25	119
Diseases of the digestive system . . . . .	31	201
Early infancy . . . . .	201	78
Diseases of the nervous system . . . . .	18	23
Septic . . . . .	8	9
Others . . . . .	16	97
Totals . . . . .	390	545

TABLE 10. STILL BIRTHS BY WARDS.

WARD	Still Births	WARD	Still Births
First . . . . .	53	Ninth . . . . .	27
Second . . . . .	21	Tenth . . . . .	40
Third . . . . .	39	Eleventh . . . . .	10
Fourth . . . . .	5	Twelfth . . . . .	17
Fifth . . . . .	20	Thirteenth . . . . .	29
Sixth . . . . .	13	Fourteenth . . . . .	44
Seventh . . . . .	31	Fifteenth . . . . .	14
Eighth . . . . .	24	Sixteenth . . . . .	30

TABLE 11. STILL BIRTHS BY NATIVITY OF MOTHER.

NATIVITY OF MOTHER	Number	Per 1,000 Living Births	NATIVITY OF MOTHER	Number	Per 1,000 Living Births
United States . . . . .	216	49.1	Austria . . . . .	33	21.6
White . . . . .	189	45.7	Germany . . . . .	13	46.5
Colored . . . . .	27	104.7	England . . . . .	2	16.0
Italy . . . . .	114	45.2	Ireland . . . . .	11	11.5
Russia . . . . .	53	32.8	Others . . . . .	28	

TABLE 12 BIRTHS BY WARDS

WARD	Births	WARD	Births
First	1,206	Ninth	539
Second	259	Tenth	810
Third	1,293	Eleventh	320
Fourth	552	Twelfth	735
Fifth	924	Thirteenth	857
Sixth	416	Fourteenth	1,103
Seventh	510	Fifteenth	345
Eighth	520	Sixteenth	648

NOTE. 238 births of non-resident mothers and address unknown not included.

TABLE 13 BIRTHS BY MONTHS

MONTH	Births	MONTH	Births
January	971	August	955
February	902	September	960
March	966	October	850
April	937	November	810
May	864	December	881
June	901		
July	954	Total	10,955

TABLE 14 BIRTHS BY NATIVITY OF MOTHER

NATIVITY OF MOTHER	Births	Percentage Distri- bution	NATIVITY OF MOTHER	Births	Percentage Distri- bution
United States	1,771	40.0	Austria	1,521	16.9
White	1,115	5.7	Germany	279	2.5
Colored	658	2	Ireland	265	2.4
Italy	2,510	22.6	England	175	1.1
Russia	1,216	11.8	Others	91	2.1

TABLE 13 BIRTHS BY ATTENDANT.

ATTENDANT	Births	% Distribution
Midwife	7,111	63.1
Physician	2,215	19.8
Hospital	1,214	11.8

TABLE 16 BIRTHS FOR EACH WARD BY NATIVITY OF MOTHER

WARD	United States	Italy	Russia	Austria	Germany	England	Ireland	Others	Total
First ..	264	875	11	11	5	11	19	10	1,206
Second	168	25	17	13	5	2	13	16	259
Third ..	219	37	583	104	15	2	3	30	1,293
Fourth ..	135	70	12	3	6	3	14	9	252
Fifth ..	251	229	191	204	5	6	15	23	924
Sixth ..	256	60	27	31	10	3	22	7	416
Seventh	187	153	60	63	10	3	16	18	510
Eighth ..	303	140	18	16	11	11	10	11	520
Ninth ..	377	34	37	39	13	17	15	8	539
Tenth ..	212	292	104	140	19	4	17	22	810
Eleventh	217	46	16	4	9	13	8	7	320
Twelfth	218	8	118	11	17	8	7	16	337
Thirteenth	250	51	88	79	14	8	23	22	537
Fourteenth	271	397	183	206	23	7	7	11	1,165
Fifteenth	187	80	12	11	4	7	28	1	317
Sixteenth	413	12	96	52	45	12	11	7	618
Totals	4,218	2,511	1,603	1,508	287	17	258	210	11,717

NOTE 238 births of non-resident mothers and address unknown not included in total.

TABLE 17. BIRTHS BY NATIVITY OF MOTHER  
AND ATTENDANT.

NATIVITY OF MOTHER	Total	Midwife	Physician	Hospital	Percentage Midwife
Italy	270	258	12	0	88
Austria-Hungary	12	11	1	0	92
United States	14	0	14	0	0
Russian	11	0	0	11	0
Germany	0	0	0	0	0
Ireland	0	0	18	0	0
England	1	0	1	0	0
Others	0	08	1	0	88
Totals	300	277	35	11	92

NOTE: Three births had no attendant.

TABLE 18. UNREPORTED BIRTHS BY MONTHS  
AND ATTENDANT.

MONTH	Midwife	Physician	Hospital	Percentage Not Reported	Total
January	3	4	0	2	9
February	2	0	2	2	6
March	1	5	0	1	7
April	0	0	0	0	0
May	0	0	0	0	0
June	2	3	0	3	8
July	1	2	0	8	11
August	0	0	0	15	15
September	10	3	6	17	36
October	5	5	0	3	* 14
November	3	6	0	2	11
December	2	2	2	2	8
Totals	29	30	10	55	125

\* One unreported birth had no attendant.

TABLE 19. LATE REPORTED BIRTHS, BY MONTHS,  
AND ATTENDANT

MONTH	Midwife	Physician	Total
January			
February			
March	25	21	46
April	6	14	20
May	2	14	16
June	3	4	7
July	4	2	6
August			
September			
October	4	8	12
November	11	7	18
December	1	—	1
Totals	52	57	109

TABLE 20. ILLEGITIMATE BIRTHS BY WARDS

WARD	Births	WARD	Births
First	* 13	Ninth	8
Second	8	Tenth	2
Third	15	Eleventh	3
Fourth	9	Twelfth	12
Fifth	15	Thirteenth	5
Sixth	7	Fourteenth	8
Seventh	17	Fifteenth	7
Eighth	7	Sixteenth	5

\* Includes illegitimate births at Florence Crittenden Home

NOTE: 11 illegitimate births non-resident and address unknown

TABLE 1. ILLEGITIMATE BIRTHS BY NATIVITY  
OF MOTHER

	Number	Rate		Number	Rate
United States	100	2.58	Germany	3	1.17
White	81	19.59	England	3	2.5
Colored	23	89.14	Ireland	2	7.5
Italy	7	2.77	Others	4	1.96
Russia	10	6.18			
Austria	10	1.1	Total	152	



**Special Tables of Vital Statistics**  
FOR 1915



# GENERAL TABLE NO. 1

Deaths from all causes not including non-resident deaths in the City of New York, and including deaths in City Hospital, and the Sanatoriums at Soho and Verona

AGES	1st Ward	2nd Ward	3rd Ward	4th Ward	5th Ward	6th Ward	7th Ward	8th Ward	9th Ward	10th Ward	11th Ward	12th Ward	13th Ward	14th Ward	15th Ward	16th Ward	Total
Under 1 year																	
Male	47	9	52	15	56	73	43	33	10	46	9	41	30	45	14	22	31
Female	43	10	50	7	36	26	21	2	13	22	5	38	18	28	10	20	95
Between 1 and 4																	
Male	24	5	15	3	15	22	5	4	5	18	6	26	13	11	6	12	180
Female	15	4	10	6	13	21	8	4	7	24	6	13	6	10	3	7	190
Between 5 and 9																	
Male	8	3	3		5	6	4	1	5	3	3	4	6	4	7	4	68
Female																	72
Between 10 and 14																	
Male	1	4	5	1	3	5	1	1	2	1	3		3	5		7	36
Female	2								4								25
Between 15 and 19																	
Male	6	12	5	1	6	10	2	2	3	5	2			4	5	2	66
Female	4	3	5	2	5	10	2	7		3	2	4	3	5	2	3	61
Between 20 and 24																	
Male	4	8	6		11	12	6	3	6	1	3	6	3	4	3	6	81
Female	5	7	9	4	4	13	1	2	5	3	2	5	6	4	5	7	85
Between 25 and 29																	
Male	5	7	8	4	8	28	10	3	6	3	3	3	9	9	3	5	114
Female	4	13	12	2	9	21	3	2	5	5	11	6	6	9	2	4	113



# GENERAL TABLE NO. 1—Continued

Deaths from all causes, not including transient deaths, by Wards, Age, Sex, and including deaths in City Hospital, and the Sanatoriums at Soho and Verona.

AGE.	1st Ward	2nd Ward	3rd Ward	4th Ward	5th Ward	6th Ward	7th Ward	8th Ward	9th Ward	10th Ward	11th Ward	12th Ward	13th Ward	14th Ward	15th Ward	16th Ward	Total
Between 6 and 14—																	
Male	11	12	10	4	11	21	2	13	17	5	7	4	7	15			6
Female																	
Between 15 and 24—																	
Male	5	7	8	6	4	13	5	5	10	11	12	2	13	6	3	7	126
Female	5	10	15	2	6	15	8	6	13	9	22	6	8	11	10	8	163
Between 25 and 34—																	
Male	6	10	7	1	3	18	5	4	18	3	7	2	7	7	3	5	106
Female	9	12	8	5	6	18	4	12	5	3	13	9	8	8	3	6	132
Between 35 and 44—																	
Male		4															
Female																	
Between 45 and 54—																	
Male	2	3	1	1			2	3			1		2		1	2	20
Female										1							4
Between 55 and 64—																	
Male		2	2		1				4		1		1				
Female	3	2						1	2		8	1	1				5
Totals—																	
Male	215	243	225	100	185	485	124	106	170	156	170						1,665
Female	176	197	204	56	126	316	173	165	140	133	130	140	147				1,474
Grand totals	391	440	429	156	312	801	247	271	310	289	300	290	323				3,139

TABLE 2.—DEATH RATE AND RATES FOR SEVERAL DISEASES PER 1,000  
POPULATION, FOR TEN YEARS.

DISEASE	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
Population	21,161	21,083			21,077	22,048	27,100	320,000		
Total death rate	11.2	10.6	10.16	6.92	10.1					
Scarlet fever	0.12	0.14	0.28	0.5	0.21					
Diphtheria	0.4	0.37	1.24	0.32						
Measles	0.12	0.07	0.01	0.11						
Whooping cough	0.17	0.09	0.13	0.08						
Lobar pneumonia	1.51	1.06	1.08	1.19				0.8	1.11	1
Broncho-pneumonia	0.78	0.46	0.67	0.83						
Cancer	0.74	0.85	0.71	0.81						
Heart disease	1.72	1.88	1.9	1.66						
Bright's disease	1.70	1.58	1.15	1.3						
Typhoid fever						11	0.8			

1915 does not include non-residents' deaths.

# TUBERCULOSIS (All Forms)

Deaths by age and sex for the year 1915 (including deaths in City Hospital, Verona and Somo Sanatoriums), not including non-resident deaths

Age and Sex	Jan.		Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.		Total		Total non-resident	Other
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
Under 5					2	1	2	1					1		1		1	1	1		1	1	1	1	9	7	16	3
5 to 9					3	2	1	2	2	2		1	2	2	3	1			1	2					12	13	25	2
10 to 14													1	1	1	2					2				6	8	14	3
15 to 19					1	1											1	2		2					11	6	17	2
20 to 24																												
25 to 29					1	1	2	1	2	2		4	3	2	1	2	1	4	1	3	3	4		3	23	34	57	48
30 to 34					5	3	2	8		4	2	4	2	2	1	2	6	5	5	5	2	3			32	40	72	60
35 to 39					5	6	8	5	5	2	1	2	2	4	2	9	4	2	3	3	6	4	7	2	40	48	88	95
40 to 44					6		5	4	3		5	2	5	4	2	9	1	1	4	2	4	4	3	2	33	28	61	72
45 to 49					8		5	5	7	2	8	4	5	3	5		6	2	7	2	3	4	7	4	79	53	132	106
50 to 54					7	3	7	5	3		8	2	8	2	6	4	3	1	3	2	8	2	7	2	72	29	98	92
55 to 59					9	2	2	2	8	2	4	2	3	2	4		4		3		3	2	9	1	67	13	80	7
60 to 64					4	1	1	1	7	2	4	1	4	1	1		4	1	3		1	1	5		46	10	56	50
65 to 69					5	2	1	2	1		1				1		3		3				2		23	7	30	29
70 to 74					1		2	1	1		3	1	1		1				2		1		1		14	3	17	17
75 to 79					1	1					1		1	1	1				1				1		8	2	10	10
80 and over																												
Total	28	28	44	22	67	27	44	29	47	23	38	25	31	23	3	15	24	17	39	20	34	28	46	16	521	287	808	687

## TUBERCULOSIS (All Forms).

TABLE OF CASES IN THE WARD SICK ROOMS, AND IN THE DISPENSARY, DURING THE YEAR 1891.

WARDS	Jan.		Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.			Dec.			Total		In month	Other		
	M.		F.		M.		F.		M.		F.		M.		F.		M.		F.		M.			F.			M.				F.	
1	2				1	1	4	1	6	2	1	2	2	2	4	3	5	2		1	3	4	4	1	33	21	42	12				
2	4	2	9	2	9	7	3	4	7	4	5		3	1	5	1	3	1	9	4	1	2	9	1	81	29	90	8				
3			2	1	2	1	3	2	2	1	1	3			4	4	3		3	3	2	1	3	3	32	11	42	9				
4	1	1	4		1	1	1	9	1		2	1	3	9	1		1		2	1	4	1	2		23	12	32	3				
5	1		1		3	1	3	2	1		1	1	3	2			2	1	2		2	2	1	1	20	12	28	4				
6	11	7	16	6	18	4	9	11	13	4	10	3	10	2			3	2	2	2	3	2	4	1	100	44	129	24				
7	1		3		4	4	2	3	4	3	1	3			1	2	1	2	2	2	4	1	1	100	44	129	24					
8		2			2			3		1	1	2	2	2			1	1	2		2	1	2	1	13	13	21	5				
9				1	1	3	2	1	3	1		1	2		2	2	3	1	3	3	1	1		1	21	15	31	5				
10	3	4		2	3		1	1	2		2	2	3		4	1	3								17	14	22	4				
11	3	1		5	3	2		1	1		1	1	2		1	1	2	1	2	1	3	1	1	2	14	14	24	4				
12			1		4		5		1	1	3	1	1	1	2	2		1	1	3	1	3	2		22	11	27	6				
13	3	1	4	1	6		3	4		3	3	2	6	3	2		3	1	3	1	3	2	3		30	18	50	7				
14	4	1	5		3	1	3	1	1	2	2	4	3	2	4	1	3	4		1	3	2	3	2	34	21	48	7				
15		2	1	1	1	1		1		2	3	2	5	2	2		2	1	1		1	2	1	2	17	16	29	4				
16	2	2		3	5	1	3	2	3	2	2		2	1				1	1					1	7	2	15	8				
Totals	78	98	48	22	66	27	44	39	47	90	3	95	55	23	31	17	34	17	36	29	34	28	46	16	521	287	657	121				



TABLE NO. 1.  
Total Deaths and Death Rates per Thousand, and Deaths and  
Death Rates from Pulmonary and Other Forms  
of Tuberculosis Since 1900.

YEAR	Total Deaths	Total Death Rate per M.	Total Deaths Pulmonary Tuberc.	Death Rate Pulmonary Tuberc.	Total Deaths All Forms Tuberc.	Death Rate All Forms Tuberc. per M.
1900	7086	25	667	24	676	24
1901	6803	24.7	581	22	590	22
1902	6315	23.8	576	21.8	588	22.3
1903	629	18.50	56	2.07	578	22.0
1904	6378	23.77	55	2.0	575	22.8
1905	6225	22.71	617	2.38	585	22.5
1906	6771	25.11	689	2.59	685	25.6
1907	7674	27.8	683	2.28	707	26.9
1908	7366	27.3	628	2.4	719	26
1909	7192	26.67	571	1.99	791	24.5
1910	783	1.66	681	1.96	812	2.46
1911	137	17.6	781	1.66	777	2.01
1912	122	14.67	566	1.56	566	1.51
1913	22	11.6	651	1.6	651	1.63
1914	7869	14.79	58	1.46	56	1.11
1915	789	14.03	687	1.83	808	2.12

TABLE NO.  
Deaths from All Forms of Tuberculosis Arranged by Months  
for the Year 1915

M O N T H	P R I M A R Y			O T H E R F O R M S		
	M	Female	Total	Male	Female	Total
January			18	6		8
February	44	19	63	5	2	7
March	54	23	77	11		11
April	37	32	69	7	7	14
May	42	18	60	5	8	13
June	34	21	55	3		3
July	44	15	59	11	8	19
August	25	13	38	7		7
September	31	16	47	2		2
October	36	15	51	2		2
November	33	21	54	5		5
December	42	15	57	3		3
Totals	455	233	688	67	5	72

# PNEUMONIA (All Forms)

Deaths by age and sex for the year 1917, including deaths in City Hospital, Veterans and Social Settlements, and including non-resident deaths

AGES	Jan		Feb		March		April		May		June		July		August		Sept.		Oct		Nov		Dec		Total.		Total	Lo bar	Bron cho
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F			
Under one year	13	7	8	7	2	2	14	7	5	1	8	2	1	2	3	1	5	4	6	4	4	5	5	6	31	116	37	79	
1 to 2	13	6	2	7	16	9	7	4	9	4	4	2	1	4	4				5	3	4	8		38	49	107	46	61	
2 to 3				2	1		3		3		1	1	1		3		1				2	1	12	10	22	7	13		
3 to 4					1		1	1			2	2					1		1			1		8	3	11	8	3	
4 to 5	1				1	1		1															1	3	2	5	3	2	
5 to 6			1		1												1				1	2	1	1	4	4	8	6	2
6 to 7			1		1	2			1								1				1	3	1	7	4	11	9	2	
7 to 8	2		1	1	1		4		2				1	2	1		1		1				1		8	9			
8 to 9					1	1	3		1	5		1					1					4		13	2	15	13	2	
9 to 10	1	1	1		1	1	4	3		3					1	1	2		2	1	1	3	2	17	11	28	27	1	
10 to 11	3	2			2	2	1		3	1					1	1					3	2	4	1	17	12	29	25	1
11 to 12	2	1	1	2	1	1	2	6	2		3	1	1					1		4	1	6	1	23	13	36	21	7	
12 to 13	3	3	2	1	2	4	2	3	1	1					1		1	1	2	1	2	1	1	14	18	32	29	3	
13 to 14	2	1		1	3	2	5	1	1		1						1		2		2	2	4	15	13	28	23	5	
14 to 15	6	4	1	1	4		5	1	1		1	1					1		1	1	2	3	1	23	16	39	24	9	
15 to 16	2	2	2	3	3	4	3	1	1	1		1			1	2	1		1		1	3	4	17	18	35	31	4	
16 to 17	1	1	2			5	1	3		1	2	1	1				1		1	1		4	2	11	15	26	20	6	
17 to 18		1		2	1	4	3	3	1		2	1	1	1			1		1	1	1	1	1	9	17	26	22	4	
18 to 19		1			3	1		1		1					1				2	1				6	5	11	9	2	
20 to 21					1	1											1							1	2	3	1	2	
22 and over													1										1		1		1	1	
Totals	48	27	28	27	43	40	59	29	19	18	25	13	9	8	16	13	10	10	18	20	23	25	53	26	322	228	600	307	206

# CANCER.

240

Report of Cases for the year 1915 including deaths in City hospitals, Voluntary Sanatoriums, not including non-resident deaths.

	Feb		March		April		May		June		July		August		Sept		Oct		Nov		Dec		Total		Grand Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Under one year																									
1 to 2 "																									
2 to 3 "																									
3 to 4 "																									
4 to 5 "																									
5 to 6 "																									
6 to 7 "																									
7 to 8 "																									
8 to 9 "																									
9 to 10 "																									
10 to 11 "																									
11 to 12 "																									
12 to 13 "																									
13 to 14 "																									
14 to 15 "																									
15 to 16 "																									
16 to 17 "																									
17 to 18 "																									
18 to 19 "																									
19 to 20 "																									
20 to 21 "																									
21 to 22 "																									
22 to 23 "																									
23 to 24 "																									
24 to 25 "																									
25 to 26 "																									
26 to 27 "																									
27 to 28 "																									
28 to 29 "																									
29 to 30 "																									
TOTAL	18	14	19	10	9	15	16	6	26	112	207	320													

BOARD OF HEALTH

## PNEUMONIA (All Forms).

Deaths for year 1915, according to Ward, Sex and Calendar month, not including non resident deaths.

## CANCER

WARD	Jan		Feb		Mare		April		May		June		July		August		Sept		Oct		Nov		Dec		Total		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
1	1	2		1		1		2		1		1	1		1							2				1	0
	1	3	1	0		2	0	2		4	1	1	1	1	1	1	1	1	1	1	4	1	0	3	14	50	
	1	1	1	2	1	3	1	3	1	1	1	1	1	1	1	1	1	2	1	2	1	2	1	1	22	51	
2											1	0				1	0									4	2
	1	1	2						3		1	0		0			1	1			1	1		1	6	9	
	1	5	2	4		4		2	3	1	0		1	1	1	0			2	1	1			1	14	28	
3	1	1		1						1		1		1	1	1	1		1	1				1	3	1	
		0			1			1	1						1	1		1		1	1			1	3	1	
					1			1	1							2	2		2	1		1		0	0	12	
Centre				2	1	1	1	0				1			1		1	1	1	1	1	1		6	0		
Everett	1		1	1		3		1	1	1		0			1	2			1	1			1	1	7	2	
Wells				1	1	0		0		3		2			1	1			1		1	1		2	4	4	
Thirteenth	1	3			1	0		0	1		1	1	1						2		1	1		3	6	15	
Fourteenth	1		1		1	2		1		1			0	0	2	1	1	3	1		1	3		12	14		
Fifteenth		2																1			1	1		0	0	0	
Sixteenth	1		2					1		1					0		1	1	1	1	1	2	0	1	9	9	
Totals	10	21	8	17	7	12	6	0	7	3	3	1	0	1	15	8	14	15	30	0	16	16	6	16	13	90	

# HEART DISEASE

Deaths by Age, Sex and Cause of Death at 1905, including deaths in the Hospitals Verona and Soho Sanatoriums, not including non-resident deaths

Age	Males				Females				Total
	A	B	C	D	E	F	G	H	
Under 10									
10-14									
15-19									
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54									
55-59									
60-64									
65-69									
70-74									
75-79									
80-84									
85-89									
90-94									
95-99									
100 and over									
Totals									





# BRIGHT'S DISEASE

Deaths by Age and Sex for the Year 1911, including deaths in City Hospitals, Verona and State Sanatoriums, not including non-resident deaths

AGES	Jan		Feb		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.		Total		Grand Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		F
Under 1															1						1				1	1	2	
1 to 4																			1						1		1	
5 to 9																				1					1	1	2	
10 to 14																							1	1	4	5	9	
15 to 19												1				1							1		1	3	4	
20 to 24																			1						4	4	8	
25 to 29																					1						1	
30 to 34												1					1	1	1	1	1	2	1	1	5	9	14	
35 to 39												2		1				1	1			3	1		11	6	17	
40 to 44												2	2		1	2	2		2		6	1	2	1	16	16	32	
45 to 49												2		3	4	2	2	6	3	2	2	3	1	2	31	26	57	
50 to 54												3	2	1		1	5	1	4	2	3	4	3	3	34	25	59	
55 to 59												1	1	6	3	1	1	4	1	5		3	1	6	1	33	14	47
60 to 64												1	3	4	1	3	1	1	4	5	2	2		12	2	47	22	69
65 to 69												1	1	4	2	4	4	3	1	2	3	2	3	1	28	25	53	
70 to 74												1	3	5	2	2		4	1	1	2	7	4	3	35	27	62	
75 to 79														2		2	2		1	2	3	1						
80 to 84												1	2	1		2	1		1	1			1					
85 to 89																												
90 and over																												
Totals	43	46	13	26	28	22	21	24	24	12	17	18	26	91	14	15	30	20	30	19	33	26	46	19	318	248	566	



# DIPHTHERIA

Deaths by age and sex, to 11-20-19, including deaths in city hospitals, Veterans' Administration Hospital, not including non-resident deaths

Age	Male		Female		Male		Female		Male		Female		Male		Female		Male		Female		Male		Female	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 5	1																							
5 to 9																								
10 to 14																								
15 to 19																								
20 to 24																								
25 to 29																								
30 to 34																								
35 to 39																								
40 to 44																								
45 to 49																								
50 to 54																								
55 to 59																								
60 to 64																								
65 to 69																								
70 to 74																								
75 to 79																								
80 to 84																								
85 to 89																								
90 and over																								
Totals	2	3	6	1	5	3	2																	

BOARD OF HEALTH.

247



# SCARLET FEVER

Deaths by Age and Sex for the year 1917, including deaths in City Hospitals (Verona and Solo Sanatoriums), not including non-resident deaths.

AGES	March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.		Totals	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 1																					1	1
1 to 4																					1	1
5 to 9																					1	1
10 to 14																					1	1
15 to 19																					1	1
20 to 24																					1	1
25 to 29																					1	1
30 to 34																					1	1
35 to 39																					1	1
40 to 44																					1	1
45 to 49																					1	1
50 to 54																					1	1
55 to 59																					1	1
60 to 64																					1	1
65 to 69																					1	1
70 to 74																					1	1
75 to 79																					1	1
80 to 84																					1	1
85 to 89																					1	1
90 to 94																					1	1
95 to 99																					1	1
100 and over																					1	1
Totals	2	2	1	1																	1	1

BOARD OF HEALTH.

1917



# TYPHOID FEVER

Deaths by Age and Sex at City and County, including deaths in institutions (not including non-resident deaths)

AGES	March		April		May		June		July		August		September		October		November		December	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Under 5																				
5 to 9																				
10 to 14																				
15 to 19																				
20 to 24																				
25 to 29																				
30 to 34																				
35 to 39																				
40 to 44																				
45 to 49																				
50 to 54																				
55 to 59																				
60 to 64																				
65 to 69																				
70 to 74																				
75 to 79																				
80 to 84																				
85 to 89																				
90 and over																				
Totals																				





## MEASLES

Deaths by Age and Sex for the year 1915 (including deaths in City Hospitals, Verona and Soho Sanatoriums), not including non-resident deaths

AGES	Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.		Total		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Under one year	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	1	-	1	-	1	-	2	3	-	6
1 to 2	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	1	-	-	-	-	2	2	3	-	6
3 to 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 to 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	2
Total	-	-	1	-	-	-	-	-	-	-	1	1	1	-	1	1	-	1	-	1	-	2	3	-	6

NOTE: Only two deaths over two years of age.



# WHOOPING COUGH

Deaths by Age and Sex for the year 1920 (including deaths in City Hospitals, Verona and Solo Sanatoriums), not including non resident deaths.

Age	March		April		May		June		July		August		September		October		November		December		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Under 1 year																					1
1 to 4 years																					1
5 to 14 years																					1
15 years and over																					1
Total																					4

NOTE: No deaths over 14 years of age.

# WHOOPIING COUGH

Deaths in 1914 according to Ward, Sex and Decade at Month, Totaling non-resident deaths

WARD	Feb			Mar			May		June		July		August		Sept		Oct		Nov			Dec	
	M	F	T	M	F	T	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	P	T
1																							
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100																							

BOARD OF HEALTH

## DEATHS IN INSTITUTIONS FOR 1915

Newark City Hospital	88
St. Michael's Hospital	326
German Hospital	73
St. Barnabas' Hospital.	64
Beth Israel Hospital	198
Babies' Hospital	102
Newark Private Hospital	23
Homeopathic Hospital	45
Home for Aged	16
Alms House .	51
St. James' Hospital	83
Home for Incurables	22
Home for Crippled Children	3
Little Sisters of Poor	24
Presbyterian Hospital	22
House of Good Shepherd	7
Eye and Ear Infirmary	5
Women and Children Hospital	15
Maternity Hospital	7
Baptist Home	5
Tiffany Co.	1
Second Precinct Police Station	1
Public Service	3
Ambulance en route to hospital.	3
Police Ambulance . . . . .	1
Central Railroad Depot	1
Foster Home . . . . .	1
Essex County Jail	1
Essex County Isolation Hospital	143
Dr. Waite Hospital	2
P. R. R. Depot .	1
Automobile en route to hospital	2
Central Railroad	1
Hotel Jefferson	1
City Hall . . . . .	1
Florence Crittenden Home	1
Home for Friendless	1
St. Mary's Orphanage	2
St. Peter's Orphanage	1
Lenox Hotel	1
Total . . . . .	1081

CASES AND DEATHS NEWARK CASES SENT TO ESSEX  
COUNTY ISOLATION HOSPITAL, SOHO, N. J., 1915

MONTH	TUBERCULOSIS		SCURF		FEVER		PNEUMONIA	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
January	12	7	24		4		23	5
February	15	10	13		1		28	3
March	25	5	19		2		23	1
April	20	11	14		1		19	4
May	17	9	8		2		18	5
June	22	10	2				7	1
July	31	12	5				9	2
August	17	8	5				5	1
September	9	4						
October	18	12	2					
November	15	11	9				26	3
December	18	5	13		1		13	2
Totals	219	104	106		11		192	26

Grand Total Cases 325 Deaths 112

# NON-RESIDENT DEATHS BY DISEASE, MONTHS AND SEX

DISEASE			March		April		May		June		July		August		Sept.		October		November		December	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Tuberculosis					4	3					1	4	4	3	1	-	4	2	2	-	15	
Cancer							1	2			2	3	1	1	2	1	3	1	4	3	2	3
Apoplexy											1		1			1						3
Heart disease	5	6			1	-							2	5	-	2	4	3	5	1	2	14
Pulmonary ocean.																						3
Ulcer of stomach																						1
Infantile																						5
Infantile																						2
Infantile																						3
Salpingo oophoritis																						
Uterine tumor																						
Diseases of early ad.																						
ty																						
Scrub																						
ty																						
Hemiplegia																						
Totals	5	6																				





# **MORTALITY FIGURES FOR NEWARK**

**For the Year 1915**

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Including non-resident deaths, arranged to give disease,  
age and sex and according to International Classification



## MORTALITY FIGURES FOR NEWARK FOR YEAR 1915

Including ten test-tube deaths, arranged to give disease, age, sex and recording to better advantage. Classification

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*



MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *continued*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1916 *Continued*

# MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*

CAUSE OF DEATH	Age	Under 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	Total	Not Specified																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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## MORTALITY FIGURES FOR NEWARK FOR YEAR 1915—Continued

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued.*

MORTALITY FIGURES FOR NEWARK FOR YEAR 1913. *C. mormon*

# MORTALITY FIGURES FOR NEWARK FOR YEAR 1914 *Continued*

CAUSES OF DEATH	Under All Ages	1	2	3	4	Total Under 5	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	Age over 90
							6	9	14	19	24	29	34	39	44	49	54	59	64	69	74	79	84	89	Over States
Cerebral Hemorrhage, Apoplexy																									
Males						4										1	1	1	1					1	1
Females																		1	1						
Total	8					4										1	1	1	1					1	1
Softening of the Brain																			1		1				
Males																									
Females	1																		1		1				
Total	1																		1		1				
Paralysis without Special Cause																									
Males																	1	1							
Females	1													1	1								1		
Total	1													1	1								1		
General Paralysis of the Insane														1				1						1	
Males	1													1											
Females	1												1											1	
Total	2												1	1	1	1								1	
Other Forms of Mental Abnormality																									
Insanity																									
Males	1																		1						
Females	1			1										1											
Total	2			1										1					1						

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued.*

CAUSES OF DEATH	1907		1908		1909		1910		1911		1912		1913		1914		1915		1916		1917		1918		1919		1920		1921		1922		1923		1924		1925		1926		1927		1928		1929		1930		1931		1932		1933		1934		1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950		1951		1952		1953		1954		1955		1956		1957		1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100		2101		2102		2103		2104		2105		2106		2107		2108		2109		2110		2111		2112		2113		2114		2115		2116		2117		2118		2119		2120		2121		2122		2123		2124		2125		2126		2127		2128		2129		2130		2131		2132		2133		2134		2135		2136		2137		2138		2139		2140		2141		2142		2143		2144		2145		2146		2147		2148		2149		2150		2151		2152		2153		2154		2155		2156		2157		2158		2159		2160		2161		2162		2163		2164		2165		2166		2167		2168		2169		2170		2171		2172		2173		2174		2175		2176		2177		2178		2179		2180		2181		2182		2183		2184		2185		2186		2187		2188		2189		2190		2191		2192		2193		2194		2195		2196		2197		2198		2199		2200		2201		2202		2203		2204		2205		2206		2207		2208		2209		2210		2211		2212		2213		2214		2215		2216		2217		2218		2219		2220		2221		2222		2223		2224		2225		2226		2227		2228		2229		2230		2231		2232		2233		2234		2235		2236		2237		2238		2239		2240		2241		2242		2243		2244		2245		2246		2247		2248		2249		2250		2251		2252		2253		2254		2255		2256		2257		2258		2259		2260		2261		2262		2263		2264		2265		2266		2267		2268		2269		2270		2271		2272		2273		2274		2275		2276		2277		2278		2279		2280		2281		2282		2283		2284		2285		2286		2287		2288		2289		2290		2291		2292		2293		2294		2295		2296		2297		2298		2299		2300		2301		2302		2303		2304		2305		2306		2307		2308		2309		2310		2311		2312		2313		2314		2315		2316		2317		2318		2319		2320		2321		2322		2323		2324		2325		2326		2327		2328		2329		2330		2331		2332		2333		2334		2335		2336		2337		2338		2339		2340		2341		2342		2343		2344		2345		2346		2347		2348		2349		2350		2351		2352		2353		2354		2355		2356		2357		2358		2359		2360		2361		2362		2363		2364		2365		2366		2367		2368		2369		2370		2371		2372		2373		2374		2375		2376		2377		2378		2379		2380		2381		2382		2383		2384		2385		2386		2387		2388		2389		2390		2391		2392		2393		2394		2395		2396		2397		2398		2399		2400		2401		2402		2403		2404		2405		2406		2407		2408		2409		2410		2411		2412		2413		2414		2415		2416		2417		2418		2419		2420		2421		2422		2423		2424		2425		2426		2427		2428		2429		2430		2431		2432		2433		2434		2435		2436		2437		2438		2439		2440		2441		2442		2443		2444		2445		2446		2447		2448		2449		2450		2451		2452		2453		2454		2455		2456		2457		2458		2459		2460		2461		2462		2463		2464		2465		2466		2467		2468		2469		2470		2471		2472		2473		2474		2475		2476		2477		2478		2479		2480		2481		2482		2483		2484		2485		2486		2487		2488		2489		2490		2491		2492		2493		2494		2495		2496		2497		2498		2499		2500		2501		2502		2503		2504		2505		2506		2507		2508		2509		2510		2511		2512		2513		2514		2515		2516		2517		2518		2519		2520		2521		2522		2523		2524		2525		2526		2527		2528		2529		2530		2531		2532		2533		2534		2535		2536		2537		2538		2539		2540		2541		2542		2543		2544		2545		2546		2547		2548		2549		2550		2551		2552		2553		2554		2555		2556		2557		2558		2559		2560		2561		2562		2563		2564		2565		2566		2567		2568		2569		2570		2571		2572		2573		2574		2575		2576		2577		2578		2579		2580		2581		2582		2583		2584		2585		2586		2587		2588		2589		2590		2591		2592		2593		2594		2595		2596		2597		2598		2599		2600		2601		2602		2603		2604		2605		2606		2607		2608		2609		2610		2611		2612		2613		2614		2615		2616		2617		2618		2619		2620		2621		2622		2623		2624		2625		2626		2627		2628		2629		2630		2631		2632		2633		2634		2635		2636		2637		2638		2639		2640		2641		2642		2643		2644		2645		2646		2647		2648		2649		2650		2651		2652		2653		2654		2655		2656		2657		2658		2659		2660		2661		2662		2663		2664		2665		2666		2667		2668		2669		2670		2671		2672		2673		2674		2675		2676		2677		2678		2679		2680		2681		2682		2683		2684		2685		2686		2687		2688		2689		2690		2691		2692		2693		2694		2695		2696		2697		2698		2699		2700		2701		2702		2703		2704		2705		2706		2707		2708		2709		2710		2711		2712		2713		2714		2715		2716		2717		2718		2719		2720		2721		2722		2723		2724		2725		2726		2727		2728		2729		2730		2731		2732		2733		2734		2735		2736		2737		2738		27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# MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued.*

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MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*



MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued.*

CAUSES OF DEATH	Under All Ages	1	2	3	4	Total	Under	5	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to
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## MORTALITY FIGURES FOR NEWARK FOR YEAR 1915—Continued.

CAUSES OF DEATH	Under	1	2	3	4	Total										50	55	60	65	70	75	80	85	90	95	100	Not State																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Ages					5	9	10	10	10	10	10	10	10	10													10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

MORALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*

## MORTALITY FIGURES FOR NEWARK FOR YEAR 1915—Continued

## MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 (continued).

[illegible]



## MORTALITY FIGURES FOR NEWARK FOR YEAR 1945 (continued)

# MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*

Cause of Death	Under Age 1	1	2	3	4	Total Under 5	5 to 10	10 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 60	60 to 65	65 to 70	70 to 75	75 to 80	80 to 85	85 to 90	90 and Over	Stat. N
Other Causes Deceased Early																								
Infant																								
Males																								
Females																								
Total																								
Scalds																								
Males																		1	4	3			1	
Females																		1						1
Total																		1	4	3			1	
Struck by Poison																								
Males												1		1				1						
Females												1												
Total												1		1				1						
Struck by Asphyxia																								
Males														1	1					1				1
Females															1			1						
Total														1	1			1						1
Struck by Hanging																								
Males																1	1							1
Females																								1
Total																1	1							1



# MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*

CAUSES OF DEATH	Un- der 15	15 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 to 74	75 to 84	85 to 94	95 to 104	Age Not Stated
Suicide by Drowning											
Males	2										
Suicide by Firearms											
Males	10		1	1	1	1	1				1
Females	1				1						
Total	11		1	1	2	1	1				1
Suicide by Cutting or Piercing Instruments											
Males	3						1	1			
Females	1						1				
Total	4						2	1			
Suicide by Jumping											
Males				1		1					1
Females	1		1								
Total	1		1			1					1
Suicide by Crushing											
Males	1				1						
Females	1					1					
Total	2				1	1					
Other Suicides											
Males	1			1							

## MORTALITY FIGURES FOR NEWARK FOR YEAR 1915—Continued

# MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*

CAUSES OF DEATH.	Age	Under 1	2	3	4	Under 5	to 9	to 14	to 19	to 24	to 29	to 34	to 39	to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 to 94	95 to 99	100 and over
<b>Pneumonia</b>																										
Males	5		1			1							1						1							
Total	49		1	2		3		2	1	3	2	4	7	7	9	3	1	2								
<b>Myocardia</b>													4	3												
<b>Apoplexy</b>																										
Males																										
Females	1							1																		
Total	37							1	1	1	1	1	1	3	1		2					1				
<b>Stroke</b>																										
Males																										
Females	0		1	2	3	4	1				1															
<b>Autopsy</b>																										
Males																										
Females	3							1																		
Total	28			1		1	4	3	2	4	1			1	1	2	1	2	1							
<b>Other Venereal</b>																										
Males	0		2					3							1		1		1							
Females	2		1				1	1																		
Total	11		1	2			3	1	3						1		1		1							

MORTALITY FIGURES FOR NEWARK FOR YEAR 1915 *Continued*

# MORTALITY FIGURES FOR NEWARK FOR YEAR 1945 *Continued*

CAUSES OF DEATH	Under		Total	Age																90 and Over	Age and Not Stated
	All Ages	1 to 4		5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	
Homicide by Firearms																					
Males	0			1		9		1				1									
Females						1															
Total	13			1		10		1				1									
Homicide by Cutting and Piercing Instruments																					
Males	2									2											
Homicide by Other Means																					
Males	1					1															
Females											1										
Total	1					1					1										
Not Specified or Undefined																					
Males	10						1		1		1			1							1
Females	12	2									4				1			1			
Total	22	2					1		1		5			1			1	1			



## APPENDIX I.

During the year the Board of Health adopted the following ordinances:

### An Ordinance to Prevent the Spread of Whooping Cough

Be It Ordained by the Board of Health of the City of Newark

1. No parent or guardian of any infant under ten years of age suffering from the disease commonly known as whooping cough shall permit any such infant to appear in the street or in any other public place within the City of Newark, unless such infant shall wear and expose upon the arm a band of yellow material bearing upon it the words, "Newark Health Department Whooping Cough." The band shall be in a form to be prescribed and supplied by the Board of Health, and shall be worn for a period beginning with the earliest recognition of the disease and continue until danger of infection is over, but in no event less than six weeks.

2. No parent or guardian of any infant under the age of ten years suffering from whooping cough shall permit any such infant to board any street car or other public conveyance or visit any house, other than the house in which such infant resides, or any store, school, Sunday school or building of public assembly.

3. Any parent or guardian violating any of the provisions of this ordinance shall be subject to a fine of ten dollars (\$10), for each offense.

4. This ordinance to take effect September 1st, 1915.

July 7, 1915

An Ordinance Concerning Boarding Houses for Infants and Boarding Homes for Children, and the Business of Placing Infants, and Maternity Boarding Houses or Lying-in Hospitals, providing for Licenses by the Board of Health, Providing for the Revocation Thereof, and Providing for Penalties.

Be It Ordained, by the Board of Health of the City of Newark, as follows

Section 1 That it shall be unlawful for any person, firm, corporation or association to conduct or maintain a maternity hospital, a boarding house for infants, or a boarding home for children, or to engage in, or assist in conducting, a business of placing infants as herein defined, without having a written license therefor from the Board of Health, provided that nothing in this ordinance shall apply to any institution maintained and operated by the State of New Jersey nor by any municipality thereof, or to any incorporated charitable society for the placing of infants and children

Sec 2 The following terms used in this ordinance shall have the following meanings

"Boarding house for infants" shall mean a house or other place conducted or maintained by any one who advertises himself or holds himself out as conducting a boarding house for infants under three years of age, or who receives illegitimate children under three years of age, or who has in his custody or control one or more infants under three years of age unattended by parents or guardians, for the purpose of providing such children with food or lodging, excepting children related to him by blood or marriage, or who have been legally adopted by him

"Boarding home for children" shall mean any children's home, orphanage or other institution, association, organization or individual engaged in receiving, caring for, and finding homes for orphans, dependent or neglected children

"Maternity hospital" shall mean any house or hospital where the principal business carried on shall consist in the care of women prior to, during and after childbirth



The business of placing infants shall consist in finding or assisting to find homes for any infant under the age of three years with persons other than relatives, in procuring or assisting in procuring the adoption of any such infant, in disposing or assisting to dispose of any such infant in any other manner.

Sec. 3. No license above provided for shall be granted for a term exceeding one year. Every such license shall state the name of the licensee, the particular premises in or at which the business shall be carried on, and the number of inmates that may be treated, maintained, boarded or cared for at any one time, and said license shall be posted in a conspicuous place in the house or other place at which the business is conducted. No greater number of inmates shall be kept at one time on the premises than is authorized in the license, and no inmates or infants shall be kept or disposed of within a building or place not designated in the license. The record of such license when issued shall be kept by the Board of Health. Said license shall be subject to revocation for violation of any of the provisions of this ordinance or whenever in the judgment of the Board of Health such boarding home is no longer needed. The Board of Health shall annually, or oftener if found desirable, visit and inspect or designate persons to visit and inspect, the premises and investigate the manner of conducting the business licensed. Said Board and such persons shall have the right to call for and examine the records required by this ordinance to be kept, and to inquire into all matters concerning such licensed premises and the women and children therein, and it shall be the duty of the licensee to give all information to such persons and afford them every reasonable facility for examining the records, inspecting the premises and seeing the inmates thereof.

Sec. 4. Every person, firm, corporation or association conducting a maternity hospital, a boarding house for infants, or engaged in the placing of infants, as defined in this ordinance, shall keep a record in a form to be prescribed by the Board of Health, wherein shall be entered the name, age, sex, color and religion of every child born on his premises, cared for or treated by him, or brought to him for placing, or finding a home for, or giving out for adoption, or otherwise disposing of, together with the name and address of each of the parents of said child, the name of every woman and of every child who dies while in his care together with the date of such death, also the name and

residence of the person with whom the child is placed or by whom it is adopted, this entry to be made within twenty four hours after such child is given out, taken away, or disposed of in any manner. A true copy of such record shall be sent to the Board of Health at such times as the Board of Health shall require.

Sec. 5. Any person who shall violate any of the provisions of this ordinance, upon conviction thereof shall be punished by a fine of fifty dollars (\$50)

An Ordinance to amend Section 1116, Chapter LXXIV, entitled "Contagious Diseases," of the Revised Ordinances of the City of Newark.

Be it ordained by the Board of Health of the City of Newark, as follows.—

Every practicing physician in this city shall report in writing to the Board of Health, the name of every patient he or she shall have affected with anthrax, chicken-pox, cholera, diphtheria or membranous croup, epidemic meningitis, epidermis, erysipelas, glanders, infantile paralysis or polio myelitis, leprosy, malaria, measles, mumps, ophthalmia neonatorum, plague, psittacial pneumonia, lobar pneumonia, rabies, scarlet fever, small pox (including varioloid), tetanus, trachoma, trichinosis, tuberculosis (any form), typhoid fever, typhus fever, whooping cough, yellow fever, or any other contagious disease that may be hereafter publicly declared by this board to be dangerous to the public health, together with the precise locality where such patient may be found, immediately after such physician shall ascertain or suspect the nature of such disease. Any person or persons failing to comply with, violating or offending against the provisions of this section shall, on conviction thereof, forfeit and pay a penalty of fifty dollars.

The following laws were passed by the State Legislature during 1915, which affect the health of this city —

#### Chapter 288

An act to increase the efficiency of public health protection in this State, to abolish the State Board of Health, and to create a State Department of Health, and to prescribe and define the powers and duties of such department.

## Chapter 389:

An act to amend an act entitled "An act to secure in this State the certification of births and deaths, and of the vital facts relating thereto, and to provide for the revision thereof." (Revision of 1909.)

## Chapter 366

A supplement to an act entitled "An act concerning marriages," approved March twenty-seventh, one thousand nine hundred and twelve

## Chapter 236

An act to permit the retirement, on pension, from public office or position, of the health officer or other chief officer of the local Board or Department of Public Health in cities of the first class, after twenty-five years' continuous service in public office or position and after having attained the age of sixty years, and defining the manner of payment of the said pension.

## Chapter 209

An act empowering boards of health or commission or board authorized by law to pass ordinances, in any incorporated municipality in the State to pass and enforce ordinances to license and regulate the manner of keeping boarding houses for infants and children within such municipality, to fix a license fee for the same, and to prevent unlicensed persons or corporations from keeping such boarding houses for infants and children.

## Chapter 160

An act to amend an act entitled "An act for the prevention of cruelty to animals," approved March eleventh, one thousand eight hundred and eighty

## Chapter 24

An act to amend an act entitled "A supplement to an act entitled 'An act for the punishment of crimes (Revision of 1898),' approved June fourteenth, one thousand eight hundred and ninety-eight," which said supplement was approved April thirteenth, one thousand nine hundred and eight

## Chapter 339

An act to prevent the transmission of any communicable disease through any dairy product

## Chapter 26

An act to amend an act entitled "An act concerning contagious and infectious diseases among animals, and to repeal certain acts relating thereto," approved May fourth, eighteen hundred and eighty six

## Chapters 36 and 298

An act to amend an act entitled "An act concerning contagious and infectious diseases among cattle, regulating the importation of cattle into this State and providing measures to check the spread of diseases among cattle in this State; creating the commission on tuberculosis among animals, prescribing its powers and duties and fixing penalties for violation of this act," approved April twenty fourth, one thousand nine hundred and eleven

## Chapter 291

An act for the prevention and control of rabies

## Chapter 285

An act to regulate the pasteurization of milk, cream or other milk products, to provide for the licensing of establishments where milk, cream and other milk products are pasteurized and to confer upon the Board of Health of the State of New Jersey power to make rules and regulations regarding the pasteurization of such milk, cream and other milk product

## Chapter 73

An act to amend an act entitled "An act to amend an act entitled 'An act to secure the purity of foods, beverages, confectionary, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof (Revision of 1907),' approved May twentieth, one thousand nine hundred and seven," approved April sixteenth, one thousand nine hundred and eight

## Chapters 74, 243 and 357

A supplement to an act entitled "An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, to prevent adulteration and distribution and sales thereof (Revision of 1907)," approved May twentieth, one thousand nine hundred and seven.

## Chapter 378

An act to amend an act entitled "A supplement to an act entitled 'An act to secure the purity of the public supplies of potable waters in this State,' approved March seventeenth, one thousand eight hundred and ninety-nine," approved April twenty first, one thousand nine hundred and nine.

## APPENDIX II.

Foodstuffs condemned during 1915 by Food and Drug Inspectors

- 700 quarts of milk
- 4 chickens
- 1 barrel flour.
- 58 dozen eggs.
- 12 cans salmon
- 20 cans sardines
- 4 packages powdered jelly.
- 9 bottles fish
- 5 barrels F Anise or Finocchio.
- 1 box filthy candy
- $3\frac{1}{2}$  pounds shrimp
- 9 quarts strawberries
- 7 crates strawberries
- 32 4 arts apples
- 38 quarts strawberries
- 2 boxes cherries
- 1 chicken
- 2 cans tuna fish.
- 7 cans clam chowder
- 1 can Heinz beans
- 5 cans McGowan's salmon
- 3 half cans McGowan's salmon.
- 8 cans LeRoy peas
- 4 cans Queen Quality peas
- 1 can Honey Drop corn
- 1 can Rivertide tomatoes
- 4 cans Rob Roy tomatoes
- 1 bottle My Wife's Salad Dressing
- 1 box cherries
- 3,000 bottles soda water
- 11 baskets peaches
- 1 box pears.
- 8 barrels apples
- 110 quarts eggs
- 2 boxes cans

- 1½ boxes apricots.
- 2 boxes raisins
- 1-3 barrel spiced fish
- ½ pail apple butter
- 1 chicken.
- 198 mackerel, salmon, sardines, lobster and fish.
- 19 packages Gorton Cod Fish
- 5 packages Beardsley Cod Fish.
- 4 cans Campbell's beans.
- 4 cans pimentoes
- 1 box Howard salad dressing.
- 2 bottles Royal chile sauce.
- 5 bottles onion salad
- 17 bottles Wilde's pickles
- 8 bottles Blue Label catsup
- 4 bottles smoked beef
- 7 bottles My Wife's Salad Dressing
- 6 cans Bartlett pears.
- 6 cans succotash
- 9 cans peas.
- 5 cans high grade beans
- 5 cans Honey Drop corn
- 32 cans tomatoes
- 6 cans egg plants
- 12 cans McGowan's salmon
- 7 cans blue string beans
- 4 cans high grade kidney beans.
- 84 cans Van Camp's soup
- 14½ cans milk
- 1½ bottles olive
- 26 cans tomatoes and canned fruit.
- 1 basket apples.
- 2½ muskmelons
- 5 large baskets plums
- 1 large 16-quart basket lima beans.
- 2 crates peaches
- 1 box plums
- 26 pounds pot cheese
- 5 crates cantaloupe
- 3 gallons vinegar
- 21 cases cherries, 2 dozen cans to a case.
- 300 pounds meat
- 3 large cases sarsaparilla.

- 13 small cases mixed soda
- 2½ cases cream soda
- 4 large cases mixed soda
- 13 cases gassoil.
- 5 bottles mixed soda
- 3 barrels rabbits
- 15 ducks
- 8 turkeys
- 10 chickens.
- 17 bottles Queen olives
- 15 bottles Sheteld olives
- 18 bottles large Blue Label catsup
- 9 bottles large Beechnut bacon.
- 14 bottles horse radish
- 29 bottles Curtice jam.
- 6 bottles milk jar mustard
- 18 bottles Howard salad dressing
- 15 bottles Barnett's vanilla
- 16 bottles Goodheart's extract
- 1 can Fisher Boy sardines
- 7 cans Curtice chicken
- 1 can Curtice chicken
- 7 cans Eagle milk
- 1 can Darling milk
- 1 Peerless milk
- 1 Milkland milk
- 1 can Clover milk
- 13 cans Van Camp's Milk (tall)
- 1 can Van Camp's Milk (baby)
- 7 cans Gold Cross milk
- 1 can Brakely lima beans
- 1 can shredded wheat
- 1 can Hecker's Flap Jack
- 1 packages dog cakes
- 13 packages Ralston's Food
- 7 packages yellow meal (2 pounds)
- 2 packages yellow meal (5 pounds).
- 1 packages Cream of Wheat
- 7 packages Hecker's flap jack (large).
- 1 packages puffed wheat
- 14 packages Mother's Oats
- 3 packages hominy
- 1 packages Triphosa



- 7 bottles Centennial mustard
- 87 bottles peanut butter, American brand (large).
- 24 bottles peanut butter, American brand (small)
- 16 bottles jam.
- 18 bottles Curtice jam.
- 14 cans Sinclair lima beans
- 17 packages Uncle Sam
- 17 packages Mueller's noodles
- 17 packages Felm's lard (1 pound).
- 12 cans Paradise pine apple
- 18 cans strawberries (2 quarts)
- 26 cans Booth spinach.
- 17 cans Hillsdale pineapple
- 11 cans Magnolia beets.
- 7 bottles My Wife's Salad Dressing
- 37 cans Honey Drop corn.
- 6 cans Honey Drop succotash
- 11 cans Heinz' beans (medium)
- 9 cans Heinz' beans (small)
- 9 cans Libby corned beef (1 pound)
- 9 cans F Am spaghetti
- 14 cans cherries.
- 7 cans Nesson's oil.
- 14 bottles L. S. pickles
- 73 bottles Wilde's pickles.
- 5 bottles Beardsley herring
- 1 cans Pickert's herring
- 36 cans Rob Roy tomatoe.
- 57 cans Carolh tomatoes
- 47 cans Queen Quality peas
- 37 cans Ben Favorite peas
- 29 cans LeRoy peas
- 198 cans Libby salmon
- 14 cans Heinz' beans
- 27 cans Tuna fish (1 pound)
- 12 cans Tuna fish ( $\frac{1}{2}$  pound)
- 48 cans McGowan's salmon (1 pound).
- 18 cans McGowan's salmon ( $\frac{1}{2}$  pound)
- 18 cans Jap crab meat
- 31 cans shrimp
- 51 cans Campbell's soup
- 6 cans Campbell's beans
- 1 can Instant Postum (10 pounds)

- 7 cans R. Uchita oil
- 6 cans Smider's Chili sauce,
- 7 cans Park's syrup
- 14 packages Wheaterina
- 16 packages Beardsley cod
- 39? packages Gorton cod fish
- 18 packages Dromedary dates.
- 18 packages None Such mince meat
- 18 packages Magic Yeast
- 15 packages Malt breakfast food
- 16 packages Hecker's superlative flour
- 9 bottles Clairmount smoked beef
- 11 cans clam chowder

#### CONDEMNED BY THE MEAT INSPECTOR

The following food-stuffs were condemned during the year

- 2 calves.
- 560 pounds meat
- 7 bucks of lamb
- 36 turkeys
- 15 ducks
- 10 chickens
- 426 pounds poultry
- 6 barrels rabbits
- 81 crates cantaloupes
- 13 barrels and 15 crates green peppers.
- 9 crates of strawberries

## APPENDIX III.

## MISCELLANEOUS DATA.

United States census population of 1910.....	347,469
Estimated population, 1915.....	375,000
Total area of the city's square miles.....	23.40
Built up, square miles .....	17
Meadow land, square miles .....	6.25
Length of river and bay front, miles .....	11.5
Number of miles of granite block.....	102.48
Number of miles of asphalt block .....	2.18
Number of miles of Telford pavement .....	25.18
Number of miles of cobble stone pavement .....	1.31
Number of miles of asphalt pavement .....	52.83
Number of miles of brick pavement .....	51.57
Number of miles of bitulithic pavement .....	35.51
Number of miles of wood block pavement .....	3.28
Number of miles of bituminous concrete .....	.89
Number of miles of bituminous macadam .....	.12
Number of miles of Medina sandstone pavement ....	.17
Number of miles of Warrenite pavement .....	.10
Total length of paved streets, miles .....	255.62
Number of miles of unpaved streets.....	59.08
Length of electric railways, miles, Essex Division...	193,500
Length of steam railways, miles .....	25½
Length of brick and concrete sewers, miles .....	85.27
Length of pipe sewers, miles .....	305.34
Length of private sewers, miles .....	42.52
Total length of sewers, miles .....	433.13
Total number of sewer basins .....	4,087
Length of water mains, miles .....	542
Average daily consumption of water, gallons .....	42,400,000
Capacity of water supplied per day, gallons .....	50,000,000
Number of buildings in Newark .....	60,978
Shade trees planted since 1904 .....	30,233

## PUBLIC PARKS.

Military, acres .....	6.45
Washington, acres .....	3.40
Lincoln, acres .....	4.37
Other small parks, acres .....	5.67
Branch Brook, acres .....	280.62
Eastside, acres .....	12.69
Westside, acres .....	23.04
Riverbank, acres .....	5.75
Weequahic, acres .....	315.08



